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THREE IN ONE.

You would undoubtedly find it an interesting study, if it were possible to catch a glimpse successively of the nearly 25,000 homes in Detroit and Michigan, wherein the DETROIT JOURNAL is found to be a daily necessity.

Presuming that you are interested in advertising, we venture a suggestion in a business way.

The 100,000 or more people who go to make up these homes are consumers; they make it a rule to buy where they can buy the cheapest; they have long since learned that it pays to read the advertising columns of their home paper.

You are looking for customers.

To this end allow us to submit a proposition:

With the best article under the sun, with a large and attractive stock of goods, with a pleasant store and attentive clerks, with bargain prices, with all these, you still lack publicity.

But the question of publicity is not all.

The medium for securing you the attention you desire, has much to do with the matter; an old advertiser summed up his experience in the following:

"The clean newspaper has in the long run, the most permanent patronage and circulation. The paper which goes into the homes and is read by the families, is the paper which counts its subscribers by the year, instead of depending on the fluctuating sales of the news companies, and it is, after all, the family newspaper which swings the power and pays the advertiser."

But again, there are home papers and clean home papers; C. H. K. Curtis, proprietor of the *Ladies' Home Journal*, and, by the way, one of the largest and most successful advertisers in the country, makes a strong additional point:

"To what do I chiefly attribute my success? Making a first-class article and widely advertising it. Under those conditions any one can make a success. And I have observed that the evening paper is the best medium of advertising for this reason: A man buys a morning paper, reads it hastily and leaves it at his office; an evening paper, however, he takes home, where he has more time to read it, and where, too, it is read by all the family."

All these are found in the DETROIT JOURNAL—*publicity, a clean home paper, and an evening paper*—three in one.

We most respectfully solicit your business.

THE DETROIT JOURNAL CO.

The DETROIT JOURNAL Year Book



PUBLISHED BY
THE DETROIT JOURNAL COMPANY,
DETROIT, MICHIGAN.

ASTRONOMICAL CALENDAR FOR 1891.

ECLIPSES AND TRANSIT.

Four eclipses will occur in the year 1891,—two each of the Sun and the Moon,—also a transit of Mercury over the Sun's disk.

I. Thursday, May 23, a total eclipse of the Moon, invisible on the American Continent, but visible as total or partial in other parts of the world.

II. Saturday, June 6, an annular eclipse of the Sun, visible as a partial eclipse north and west of a line projected from the mouth of the St. Lawrence through Ottawa, Can., Detroit, St. Louis, Dallas, Tex., and Sinaloa, Mex.; and so visible in nearly all parts of Michigan. It will begin in Eastern Michigan at 9:56 o'clock, A. M., local time, and end at 10:34. Only a very small part of the Sun's disk will be eclipsed.

III. Sunday, November 15, a total eclipse of the Moon, visible in North and South America. The Moon enters the shadow at 5:03 A. M., Detroit time; total eclipse, 6:05; middle of eclipse, 6:47; total eclipse ends, 7:29; the Moon leaves the shadow, 8:31. The magnitude of the eclipse will be 1.393, on the Moon's diameter as 1.

IV. Tuesday, December 1, a partial eclipse of the Sun, invisible in North America.

V. Saturday, May 9, a transit of Mercury, invisible in North America, west of Maine and Quebec. Ingress, 6:22 P. M., Detroit time; egress, after sunset.

LEGAL HOLIDAYS IN MICHIGAN, 1891.

Thursday, Jan. 1—NEW YEAR'S DAY.

Monday, Feb. 23 (the 22d being Sunday)—WASHINGTON'S BIRTHDAY.

Saturday, May 30—DECORATION DAY.

Saturday, July 4—INDEPENDENCE DAY.

Thursday, Nov. 26—THANKSGIVING DAY.

Friday, Dec. 25—CHRISTMAS DAY.

SEASONS, 1890-91.

WINTER begins Dec. 21, 1890, 3:13 P. M.; lasts 89 days, 40 minutes.

SPRING begins March 20, 1891, 3:53 P. M.; lasts 92 days, 20 hours, 8 minutes.

SUMMER begins June 21, 1891, 12:01 P. M.; lasts 93 days, 14 hours, 40 minutes.

AUTUMN begins Sept. 23, 1891, 2:41 A. M.; lasts 89 days, 18 hours, 27 minutes.

WINTER begins Dec. 21, 1891, 9:08 P. M.

The tropical year is in length 365 days, 5 hours, and 55 minutes.

MORNING STARS.

MERCURY, about Feb. 6, June 5, Sept. 28.

VENUS, until Sept. 18.

MARS, after July 20.

JUPITER, after Feb. 13, until Sept. 5.

SATURN, until March 4, and after Sept. 13.

EVENING STARS.

MERCURY, about April 18, Aug. 16, Dec. 11.

VENUS, after Sept. 18.

MARS, until July 20.

JUPITER, until Feb. 13, and after Sept. 5.

SATURN, after March 4, until Sept. 13.

FIXED AND MOVABLE FESTIVALS.

Epiphany.....	Jan.	6	Ascension Day (Holy Thursday).....	May	7
Septuagesima Sunday.....	"	25	Pentecost (Whit Sunday).....	"	17
Quinquagesima (Shrove Sunday).....	Feb.	8	Trinity Sunday.....	"	24
Ash Wednesday.....	"	11	Corpus Christi.....	"	28
First Sunday in Lent.....	"	15	St. John Baptist (Midsummer Day), June 24		
St. David.....	March	1	Michaelmas Day.....	Sept.	29
St. Patrick.....	"	17	First Sunday in Advent.....	Nov.	29
Palm Sunday.....	"	22	St. Andrew.....	"	30
Annunciation.....	"	25	St. Thomas.....	Dec.	21
Good Friday.....	"	27	Christmas Day.....	"	25
Easter Sunday.....	"	29			
Low Sunday.....	April	5			
St. George.....	"	23			
Rogation Sunday.....	May	3			

EMBER DAYS.

Feb. 18, 20, 21; May 20, 22, 23; Sept. 16, 18, 19; Dec. 16, 18, 19.



STATE CAPITOL, LANSING.

Corner-stone laid, Oct. 2, 1873; dedicated, Jan. 1, 1879. Length, besides porticos, 345 feet; width, 191 feet; height of lantern, 265 feet. Cost, about \$1,500,000.

First Month.

JANUARY, 1891.

31 Days.

Day of Month.	Day of Week.	For Michigan.				
		Sun rises.	Sun sets.	Moon rises.		
1	Th	7 30	4 38	10 52		
2	Fri	7 30	4 39	11 53		
3	Sat	7 30	4 40	mor		
4	S	7 30	4 40	0 54		
5	Mo	7 30	4 42	1 59		
6	Tu	7 30	4 43	3 7		
7	We	7 30	4 44	4 17		
8	Th	7 29	4 45	5 29		
9	Fri	7 29	4 46	6 39		
10	Sat	7 29	4 47	sets		
11	S	7 28	4 48	6 3		
12	Mo	7 28	4 49	7 22		
13	Tu	7 28	4 50	8 41		
14	We	7 27	4 51	9 58		
15	Th	7 27	4 52	11 11		
16	Fri	7 27	4 53	mor		
17	Sat	7 26	4 55	0 21		
18	S	7 25	4 56	1 31		
19	Mo	7 25	4 57	2 40		
20	Tu	7 24	4 58	3 47		
21	We	7 24	5 0	4 52		
22	Th	7 23	5 1	5 51		
23	Fri	7 22	5 2	6 43		
24	Sat	7 21	5 3	rises		
25	S	7 21	5 5	5 40		
26	Mo	7 20	5 6	6 42		
27	Tu	7 19	5 7	7 43		
28	We	7 18	5 8	8 43		
29	Th	7 17	5 10	9 43		
30	Fri	7 16	5 12	10 44		
31	Sat	7 15	5 13	11 46		

MOON'S PHASES.

	D.	H.	M.
Third Quarter.....	3	4	12 morn.
New Moon.....	10	9	24 "
First Quarter.....	17	0	17 "
Full Moon.....	24	6	25 eve.

Brief Scripture quotations for daily memorizing.

What time I am afraid I will trust in Thee.
The Lord will be a refuge for the oppressed.
My Sabbaths ye shall keep; for it is a sign between Me and you.
Every one that asketh receiveth, and he that seeketh findeth.
I will help thee, saith the Lord and thy Redeemer.
Put away the evil of your doings from before Mine eyes.
A good tree can not bring forth evil fruit.
By their fruits ye shall know them.
Him that overcometh will I make a pillar in the temple of My God.
Remember the Sabbath Day, to keep it holy.
The Son of Man is come to save that which was lost.
For My yoke is easy and my burden is light. [arms.
The eternal God is thy refuge, and underneath are the everlasting
Pray for those who despite fully use you, and persecute you.
Ask, and it shall be given you; seek, and ye shall find.
Have peace one with another.
The Lord blessed the Sabbath Day, and hallowed it.
If the blind lead the blind, both shall fall into the ditch.
Justice and judgment are the habitation of Thy throne.
He that is not against us is on our part.
He that humbleth himself shall be exalted.
We have a building of God, a house not made with hands.
Be ye kind to one another, tender-hearted, forgiving one another,
The Lord hath given you the Sabbath.
Cease to do evil, learn to do well.
Fear Him which is able to destroy both soul and body in hell.
Out of the abundance of the heart the mouth speaketh.
Take heed that ye despise not one of these little ones.
Get thee behind Me, Satan; thou art an offense unto Me.
Though the Lord be high, yet hath he respect unto the lowly.



THE UNIVERSITY OF MICHIGAN, ANN ARBOR.

Founded, 1837; opened, 1841. Medical School organized, 1850; Law School, 1859; Schools of Homoeopathy, Dental Surgery, and Pharmacy, since added. Faculty, about 100; students, about 2,400; libraries, 100,000 books and pamphlets; property, \$1,000,000. James B. Angell, President.

Second Month.

FEBRUARY, 1891.

28 Days.

Day of Month.	Day of Week.	For Michigan			MOON'S PHASES.			
		Sun rises.	Sun sets.	Moon rises.		D.	H.	M.
1	Sa	7 14	5 14	mor	Third Quarter.....	1	10	42 eve.
2	Mo	7 13	5 15	0 50	New Moon.....	8	8	12 "
3	Tu	7 12	5 17	1 57	First Quarter.....	15	0	29 "
4	We	7 11	5 18	3 6	Full Moon.....	23	1	18 "
5	Th	7 10	5 19	4 15				
6	Fri	7 9	5 20	5 21				
7	Sat	7 8	5 22	6 21				
8	Sa	7 7	5 23	sets				
9	Mo	7 6	5 25	6 14				
10	Tu	7 4	5 26	7 34				
11	We	7 2	5 27	8 51				
12	Th	7 1	5 28	10 6				
13	Fri	7 0	5 30	11 20				
14	Sat	6 59	5 31	mor				
15	Sa	6 58	5 32	0 31				
16	Mo	6 56	5 33	1 40				
17	Tu	6 55	5 35	2 46				
18	We	6 53	5 36	3 47				
19	Th	6 52	5 37	4 41				
20	Fri	6 50	5 38	5 28				
21	Sat	6 49	5 39	6 7				
22	Sa	6 48	5 41	6 29				
23	Mo	6 46	5 42	rises				
24	Tu	6 44	5 43	6 36				
25	We	6 43	5 45	7 36				
26	Th	6 41	5 46	8 37				
27	Fri	6 39	5 47	9 38				
28	Sat	6 38	5 48	10 41				

The Sabbath of rest. holy to the Lord.
 Whosoever believeth on Him shall not be ashamed.
 I have blotted out, as a thick cloud, thy transgressions.
 Come, take up the cross, and follow Me.
 Thy faith hath saved thee; go in peace.
 They that wait upon the Lord shall renew their strength.
 They that sow in tears shall reap in joy.
Observe the Sabbath for a perpetual covenant.
 The eye of the Lord is upon those that fear him.
 We are more than conquerors, through him that loved us.
 Love your enemies; bless them that curse you.
 Ye shall be hated of all nations for My name's sake.
 The Lord is round about his people from henceforth, even forever.
 When I sit in darkness the Lord shall be a light unto me.
There shall be to you an holy day, a Sabbath of rest.
 Show me thy ways, O Lord; teach me thy paths.
 Be thou in the fear of the Lord all the day long.
 In all thy ways acknowledge Him, and He shall direct thy paths.
 No good thing will He withhold from those that walk uprightly.
 He shall reward every man according to his works.
 If any man serve Me, him will the Father honor.
It shall be a Sabbath of rest unto you.
 Ye shall know the truth, and the truth shall make you free.
 I am with you alway, even unto the end of the world.
 I will not send them away fasting, lest they faint in the way.
 There remaineth therefore a rest to the people of God.
 When thine eye is single, thy whole body also is full of light.
 Then shall we know, if we follow on to know the Lord,



ASYLUM FOR THE INSANE, KALAMAZOO.

Established by act of Legislature 1848, opened 1859. Two principal buildings, brick with stone trimmings, one for Male, one Female Department. Present value of property, about \$1,000,000. Nearly 1000 inmates. George C. Palmer, M. D., Superintendent.

Fourth Month.

APRIL, 1891.

30 Days.

Day of Month.	Day of Week.	For Michigan				
		Sun	Mon	Tue	Wed	Thurs
1	We	5 43	6 25	0 57		
2	Th	5 41	6 26	1 58		
3	Fri	5 40	6 27	2 52		
4	Sat	5 38	6 29	3 37		
5	S	5 36	6 30	4 15		
6	Mo	5 34	6 31	4 47		
7	Tu	5 33	6 32	5 16		
8	We	5 31	6 33	sets		
9	Th	5 30	6 34	7 45		
10	Fri	5 28	6 36	9 2		
11	Sat	5 26	6 37	10 16		
12	S	5 24	6 38	11 26		
13	Mo	5 23	6 39	mor		
14	Tu	5 21	6 40	0 29		
15	We	5 20	6 41	1 23		
16	Th	5 18	6 42	2 7		
17	Fri	5 16	6 43	2 44		
18	Sat	5 15	6 44	3 15		
19	S	5 13	6 45	3 41		
20	Mo	5 12	6 47	4 4		
21	Tu	5 10	6 48	4 25		
22	We	5 8	6 49	4 45		
23	Th	5 7	6 50	5 7		
24	Fri	5 5	6 51	rises		
25	Sat	5 4	6 52	8 37		
26	S	5 2	6 53	9 45		
27	Mo	5 1	6 54	10 52		
28	Tu	5 0	6 56	11 54		
29	We	4 59	6 57	mor		
30	Th	4 57	6 58	0 49		

MOON'S PHASES.				D.	H.	M.
Third Quarter.....	2	0	30	morn.		
New Moon.....	8	2	57	eve.		
First Quarter.....	15	7	40	"		
Full Moon.....	23	11	5	"		

The Lord is good unto them that wait for him.
 Thou shall love the Lord thy God with all thy heart.
 He that gathereth not with Me scattereth abroad.
 Even as the Father hath loved Me, I also have loved you.
 In it thou shalt not do any work.
 Set your affections on things above, not on things in the earth.
 Thou shalt be recompensed at the resurrection of the just.
 He that is unjust in the least is unjust also in much.
 He that cometh to Me shall never hunger.
 Surely I know that it shall be well with those that fear God.
 He knoweth our frame, He remembereth that we are dust.
 Remember that thou wast a servant.
 They that trust in the Lord shall be as Mount Zion.
 Teach me thy way, O Lord, and lead me in a plain path.
 Blessed are they that mourn, for they shall be comforted.
 Blessed is he, whosoever shall not be offended in Me.
 Bear ye one another's burdens, and so fulfil the law of Christ.
 Blessed are they that hear the word of God, and keep it.
 Blessed is the man that keepeth the Sabbath.
 A man is justified by faith without the deeds of the law.
 There is no respect of persons with God.
 All things work together for good to them that love God.
 As thy day, so shall thy strength be.
 Lord, if thou wilt, thou canst make me clean.
 The bread of God is that which cometh down out of heaven.
 Hallow ye the Sabbath day.
 Where your treasure is, there will your heart be also.
 His mercy is everlasting, and his truth endureth to all generations.
 In the shadow of Thy wings will I rejoice.
 Hold that fast which thou hast, that no man take thy crown.



EASTERN ASYLM FOR THE INSANE, PONTIAC.

Occupied Aug. 1, 1878; Female Department completed May, 1882. Value of property, about \$750,000. Patients Jan. 1, 1889, 785. Dr. C. B. Burr, Superintendent.

Fifth Month.

MAY, 1891.

31 Days.

Day of Month.	Day of Week.	For Michigan					MOON'S PHASES.		
		Sun rises.	Sun sets.	Mo. rises.	H M	H M	D.	H.	M.
1	Fri	4 56	6 59	1 37			Third Quarter.....	1	7 51 morn.
2	Sat	4 54	7 0	2 16			New Moon.....	8	0 15 "
3	Sun	4 53	7 1	2 48			First Quarter.....	15	1 4 eve.
4	Mo	4 51	7 2	3 16			Full Moon.....	23	0 26 "
5	Tu	4 50	7 3	3 42			Third Quarter.....	30	0 54 "
6	We	4 49	7 4	4 8					
7	Th	4 48	7 6	4 35					
8	Fri	4 46	7 7	sets					
9	Sat	4 45	7 8	9 5					
10	Sun	4 44	7 9	10 12					
11	Mo	4 43	7 10	11 12					
12	Tu	4 42	7 11	mor					
13	We	4 41	7 12	0 3					
14	Th	4 40	7 13	0 44					
15	Fri	4 39	7 14	1 17					
16	Sat	4 38	7 15	1 44					
17	Sun	4 37	7 16	2 8					
18	Mo	4 36	7 17	2 30					
19	Tu	4 35	7 18	2 51					
20	We	4 34	7 19	3 11					
21	Th	4 33	7 20	3 33					
22	Fri	4 32	7 21	3 57					
23	Sat	4 31	7 22	rises					
24	Sun	4 30	7 23	9 41					
25	Mo	4 30	7 24	9 47					
26	Tu	4 29	7 25	10 46					
27	We	4 29	7 26	11 37					
28	Th	4 28	7 27	mor					
29	Fri	4 27	7 27	0 18					
30	Sat	4 27	7 28	0 52					
31	S	4 26	7 29	1 21					

One is your Father, which is in heaven.
He that receiveth Me receiveth Him that sent Me.
The Sabbath shall be a sign between Me and you.
I am not come to call the righteous, but sinners, to repentance.
In the Lord Jehovah is everlasting strength.
If ye keep My commandments, ye shall abide in My love.
I can do all things through Christ, which strengtheneth me.
In your patience possess ye your souls.
Search the Scriptures, for in them ye think ye have eternal life.
Thou hast profaned My Sabbaths.
He whom God hath sent speaketh the words of God.
Master, I will follow thee whithersoever thou goest.
Be of good comfort; thy faith hath made thee whole.
According to your faith be it unto you.
In such an hour as ye think not, the Son of Man cometh.
No man can serve two masters: ye cannot serve God and Mammon.
They have put no difference between the holy and profane.
The spirit truly is ready, but the flesh is weak.
Rejoice, because your names are written in heaven.
Where the spirit of the Lord is, there is liberty.
If ye be willing and obedient, ye shall eat the good of the land.
Let your communication be, Yea, yea; Nay, nay.
Consider the lilies of the field, how they grow.
It is lawful to do well on the Sabbath day.
He that believeth on Me, though he die, yet shall he live.
Enter thou into the joy of thy Lord.
Prepare ye the way of the Lord: make his paths straight.
Pray without ceasing: in everything give thanks.
Let us cleanse ourselves from all filthiness of the flesh and spirit.
Casting all your care upon Him, for He careth for you.
The Sabbath was made for man.



NORTHERN ASYLUM FOR THE INSANE, TRAVERSE CITY.

Jas. D. Munson, Superintendent. Established, 1885 ; cost, \$564,000 ; capacity, 600.

Sixth Month.

JUNE, 1891.

30 Days.

Day of Month.	Day of Week.	For Michigan				MOON'S PHASES.			D.	H.	M.
		Sun	M	H	M	rises.	sets.	rises.			
1	Mo	4	26	7	30	1	47				
2	Tu	4	25	7	30	2	11				
3	We	4	25	7	31	2	36				
4	Th	4	24	7	32	3	3				
5	Fri	4	24	7	33	3	35				
6	Sat	4	24	7	33	sets.					
7	S	4	23	7	34	8	53				
8	Mo	4	23	7	35	9	53				
9	Tu	4	23	7	35	10	38				
10	We	4	22	7	36	11	15				
11	Th	4	22	7	36	11	45				
12	Fri	4	22	7	37	mor.					
13	Sat	4	22	7	37	0	10				
14	S	4	22	7	38	0	32				
15	Mo	4	22	7	38	0	53				
16	Tu	4	22	7	38	1	14				
17	We	4	22	7	39	1	35				
18	Th	4	22	7	39	1	58				
19	Fri	4	23	7	39	2	24				
20	Sat	4	23	7	40	2	56				
21	S	4	23	7	40	3	36				
22	Mo	4	23	7	40	rises.					
23	Tu	4	23	7	40	9	31				
24	We	4	24	7	40	10	16				
25	Th	4	24	7	40	10	54				
26	Fri	4	24	7	40	11	25				
27	Sat	4	25	7	40	11	51				
28	S	4	25	7	40	mor.					
29	Mo	4	25	7	40	0	15				
30	Tu	4	26	7	40	0	40				

In His name shall the Gentiles trust.
 Whosoever will lose his life for My sake shall find it.
 Hold up my goings in thy paths, that my footsteps slip not.
 Thou, Lord, hast not forsaken them that seek thee.
 Suffer little children, and forbid them not, to come unto Me.
 Wisdom is justified of her children.
 Ye bring wrath upon Israel by profaning the Sabbath.
 Strive to enter in at the strait gate.
 This is My commandment, that ye love one another.
 Follow peace with all men, and holiness.
 Resist the devil, and he will flee from you.
 Fight the good fight of faith, lay hold on eternal life.
 Why beholdest thou the mote that is in thy brother's eye?
 The Son of Man is Lord of the Sabbath.
 When the Son of Man cometh, shall he find faith on the earth?
 Why stand ye here all the day idle?
 What will ye therefore that I do unto you?
 O thou of little faith, wherefore didst thou doubt?
 Is not the life more than meat, and the body than raiment?
 What shall a man give in exchange for his soul?
 And He reasoned in the synagogue every Sabbath.
 If God be for us, who can be against us?
 The Lord is my light and my salvation; whom shall I fear?
 Seek ye first the kingdom of God and his righteousness.
 Unto every one that hath shall be given.
 All things are possible to him that believeth.
 He hath filled the hungry with good things.
 There remaineth therefore a rest to the people of God.
 A city that is set on an hill can not be hid.
 When I am in the world, I am the Light of the World.



MICHIGAN STATE PRISON, JACKSON.

Opened, 1839; capacity, about 750; value of property, about \$700,000. Hiram F. Hatch, Warden.

Seventh Month.

JULY, 1891.

31 Days.

Day of Month.	Day of Week.	For Michigan				
		Sun	rises.	Sun	sets.	Moon rises.
1	We	4 26	7 40	1 7		
2	Th	4 27	7 40	1 86		
3	Fri	4 27	7 40	2 10		
4	Sat	4 28	7 40	2 50		
5	S	4 29	7 40	3 37		
6	Mo	4 29	7 40	sets.		
7	Tu	4 30	7 39	9 13		
8	We	4 30	7 39	9 45		
9	Th	4 31	7 38	10 12		
10	Fri	4 32	7 38	10 36		
11	Sat	4 33	7 38	10 57		
12	S	4 33	7 37	11 17		
13	Mo	4 34	7 37	11 37		
14	Tu	4 35	7 36	11 59		
15	We	4 36	7 35	mor		
16	Th	4 36	7 35	0 23		
17	Fri	4 37	7 34	0 52		
18	Sat	4 38	7 34	1 28		
19	S	4 39	7 33	2 13		
20	Mo	4 40	7 32	3 9		
21	Tu	4 41	7 31	rises.		
22	We	4 42	7 30	8 51		
23	Th	4 43	7 29	9 24		
24	Fri	4 44	7 29	9 53		
25	Sat	4 45	7 28	10 20		
26	S	4 46	7 27	10 45		
27	Mo	4 47	7 26	11 10		
28	Tu	4 48	7 25	11 38		
29	We	4 49	7 24	mor		
30	Th	4 50	7 23	0 10		
31	Fri	4 51	7 21	0 48		

MOON'S PHASES.			D.	H.	M.
New Moon	.....	5	9	54	eve.
First Quarter	.....	13	11	29	"
Full Moon	.....	21	7	54	morn.
Third Quarter	.....	27	10	32	"

Every branch in Me that hath not fruit, He taketh it away.
 I will not leave you comfortless; I will come unto you.
 He hath not despised nor abhorred the affliction of the afflicted.
 Despise not the chastening of the Almighty.
There the wicked cease from troubling and there the weary be at rest.
 There is forgiveness with Thee, that Thou mayest be found.
 They that be whole need not a physician, but they that are sick.
 Even so, Father, for so it seemed good in thy sight.
 He that soweth and he that reapeth may rejoice together.
 Behold, the kingdom of God is within you.
 Ask, and ye shall receive, that your joy may be full.
I will hear what the Lord will speak.
 In the world ye have tribulation, but be of good courage.
 We love Him, because He first loved us.
 Lord, that our eyes may be opened.
 Enter ye in at the strait gate.
 If any man thirst, let him come to Me and drink.
 Let not your heart be troubled, neither let it be afraid.
A day in thy courts is better than a thousand.
 Bring forth therefore fruits meet for repentance.
 I am not come to destroy, but to fulfil.
 Of His kingdom there shall be no end.
 He shall set the sheep on his right hand, but the goats on his left.
 Go and sell that thou hast, and give to the poor.
 Though He slay me, yet will I trust in Him.
I was glad when they said. Let us go into the house of the Lord.
 He shall deliver thee in six troubles; yea, in seven.
 The Lord is very pitiful, and of tender mercy.
 Return unto me, for I have redeemed thee.
 He shall redeem Israel from all his iniquities.
 To him that knocketh it shall be opened.



STATE HOUSE OF CORRECTION AND REFORMATORY, IONIA.

Located, 1877; first cost, \$250,000; inmates, about 750. Edwin C. Watkins, Warden.
Asylum for Insane Criminals attached; completed Sept., 1885; cost, \$91,750; about 120 inmates.

Eighth Month.

AUGUST, 1891.

31 Days.

Day of Mon'th.	Day of Week.	For Michigan				MOON'S PHASES.			
		Sun rises.	Sun sets.	Moon rises.		D.	H.	M.	
1	Sat	4 52 7	20 1	33		New Moon.....	1	0	22 eve.
2	S	4 53 7	19 2	25		First Quarter.....	9	2	46 morn.
3	Mo	4 54 7	17 2	53		Full Moon.....	15	6	16 eve.
4	Tu	4 55 7	16 sets			Third Quarter.....	23	2	26 morn.
5	We	4 56 7	15 8	15					
6	Th	4 57 7	14 8	39					
7	Fri	4 58 7	12 9	1					
8	Sat	4 59 7	11 9	22					
9	S	5 07 10	9 42						
10	Mo	5 17 8	10 2						
11	Tu	5 27 7	10 21						
12	We	5 37 6	10 50						
13	Th	5 47 4	11 22						
14	Fri	5 57 3	morn						
15	Sat	5 67 1	0 2						
16	S	5 77 0	0 52						
17	Mo	5 86 58	1 53						
18	Tu	5 96 57	3 6						
19	We	5 116 55	rises						
20	Th	5 126 54	7 52						
21	Fri	5 136 52	8 19						
22	Sat	5 146 51	8 45						
23	S	5 156 49	9 11						
24	Mo	5 166 48	9 39						
25	Tu	5 176 46	10 10						
26	We	5 186 44	10 47						
27	Th	5 196 43	11 30						
28	Fri	5 206 41	morn						
29	Sat	5 216 40	0 20						
30	S	5 226 38	1 17						
31	Mo	5 236 37	2 18						

The kingdom of heaven is like unto treasures hid in a field.
I will pay my vows unto the Lord now in the presence of all his people.
Thou art the Christ, the Son of the living God.
Believe on the Lord Jesus Christ, and thou shalt be saved.
God will render to every man according to his deeds.
He will regard the prayer of the destitute, and not despise the poor.
The fear of the Lord is the beginning of wisdom.
All that is within me bless His holy name.
With offerings in their hand to bring to the house of the Lord.
Heal me, O Lord, and I shall be healed.
To them that hath no might He increaseth strength.
Sanctify them in the truth; thy Word is truth.
My strength is made perfect in weakness.
Hold Thou me up, and I shall be safe.
I have prayed for thee, that thy faith fail not.
On the first day of the week Paul preached unto them.
They that worship Him must worship Him in spirit and truth.
He that believeth not on the Son shall not see life.
Be ye therefore wise as serpents, and harmless as doves.
Fear not them which kill the body, but are not able to kill the soul.
He that shall endure to the end, the same shall be saved.
Serve Him with a perfect heart and with a willing mind.
He that regardeth the day regardeth it to the Lord.
If they seek Him, He will be found of them.
If they forsake Him, He will cast them off forever.
He will keep the feet of all His saints.
Many that are first shall be last, and the last shall be first.
Many be called, but few chosen.
Whosoever will come after Me, let him deny himself.
Forsake not the assembling of yourselves together.
Thou shalt love thy neighbor as thyself.



SCHOOL FOR THE DEAF, FLINT.

Founded, 1848; opened, 1854. Formerly called the Institution for Educating the Deaf and Dumb; for the blind also until 1879. Property, about \$500,000; inmates, about 300. Marshall T. Gass, Superintendent.

Ninth Month.

SEPTEMBER, 1891

30 Days.

Day of Month.	Day of Week.	For Michigan				
		Sun rises.	Sun sets.	Moon rises.		
1	Tu	5 24 6	34 3	21		
2	We	5 25 6	33 4	24		
3	Th	5 26 6	31 sets			
4	Fri	5 27 6	29 7	20		
5	Sat	5 28 6	28 7	46		
6	S	5 29 6	26 8	6		
7	Mo	5 30 6	24 8	28		
8	Tu	5 32 6	23 8	52		
9	We	5 33 6	21 9	20		
10	Th	5 34 6	19 9	55		
11	Fri	5 35 6	17 10	39		
12	Sat	5 36 6	16 11	35		
13	S	5 37 6	14 mor			
14	Mo	5 38 6	12 0	41		
15	Tu	5 39 6	10 1	55		
16	We	5 40 6	9 3	14		
17	Th	5 41 6	7 4	35		
18	Fri	5 42 6	5 rises			
19	Sat	5 43 6	3 7	12		
20	S	5 44 6	2 7	39		
21	Mo	5 45 6	0 8	9		
22	Tu	5 47 5	58 8	44		
23	We	5 48 5	56 9	25		
24	Th	5 49 5	54 10	14		
25	Fri	5 50 5	52 11	18		
26	Sat	5 51 5	51 mor			
27	S	5 52 5	49 0	10		
28	Mo	5 53 5	47 1	13		
29	Tu	5 54 5	45 2	16		
30	We	5 55 5	44 3	18		

MOON'S PHASES.				D.	H.	M.
New Moon	.....	3	2	16	morn.	
First Quarter	.....	11	5	7	"	
Full Moon	.....	17	11	4	eve.	
Third Quarter	.....	23	5	7	"	

To-day the Detroit Journal begins its ninth year.

Not what I will, but what Thou wilt.

Ye know not what hour your Lord doth come.

Take heed that no man deceive you.

He that receiveth Me receiveth Him that sent me.

Faith cometh by hearing, and hearing by the Word of God.

Freely ye have received; freely give.

Without Him was not anything made that was made.

In Him was life, and the life was the light of men.

It is the Lord: let him do what seemeth him good.

My God shall supply all your need according to his riches.

In the time of trouble He will hide me in His pavilion.

Glorify God in your body and your spirit, which are God's.

The gift of God is eternal life, through Jesus Christ our Lord.

The Lord Jehovah is my strength and my song.

Endure hardness as a good soldier of Christ.

If God so loved us, we ought also to love one another.

He that dwelleth in love dwelleth in God.

If we confess our sins, He is faithful and just to forgive us our sins.

Ye are bought with a price; be not ye the servants of men.

If children then heirs, heirs of God and joint-heirs with Christ,

We which have believed do enter into rest.

When sin abounded, grace did much more abound.

The needy shall not always be forgotten.

The Lord is my rock, and my fortress, and my deliverer.

Your sins are forgiven you for His name's sake.

If any man love God, the same is known of him.

Weeping may endure for a night, but joy cometh in the morning.

Being justified by faith, we have peace with God.

Thou wilt cast all their sins into the depths of the sea.



STATE PUBLIC SCHOOL, COLDWATER.

For dependant and neglected children of two to twelve years. Opened, 1874; capacity, about 320; value of property, about \$250,000. C. F. Newkirk, Superintendent.

Tenth Month.

OCTOBER, 1891.

31 Days.

Day of Month.	Day of Week.	For Michigan				MOON'S PHASES.				D.	H.	M.
		Sun rises.	Sun sets.	Moon rises.								
1	Th	5 56	5 42	4 20	New Moon.....	2	6	58	eve.			
2	Fri	5 57	5 40	5 21	First Quarter.....	10	4	57	"			
3	Sat	5 58	5 38	sets	Full Moon.....	17	7	45	morn.			
4	S	6 0	5 37	6 23	Third Quarter.....	28	7	56	"			
5	Mo	6 1	5 35	6 56								
6	Tu	6 2	5 34	7 23								
7	We	6 3	5 32	7 55								
8	Th	6 4	5 30	8 35								
9	Fri	6 5	5 28	9 24								
10	Sat	6 6	5 27	10 24								
11	S	6 7	5 25	11 33								
12	Mo	6 9	5 24	mor								
13	Tu	6 10	5 22	0 48								
14	We	6 11	5 20	2 7								
15	Th	6 12	5 18	3 26								
16	Fri	6 13	5 17	4 45								
17	Sat	6 15	5 15	rises								
18	S	6 16	5 14	6 4								
19	Mo	6 17	5 12	6 37								
20	Tu	6 18	5 11	7 17								
21	We	6 20	5 9	8 4								
22	Th	6 21	5 8	8 59								
23	Fri	6 22	5 6	9 59								
24	Sat	6 23	5 5	11 3								
25	S	6 24	5 3	mor								
26	Mo	6 25	5 2	0 7								
27	Tu	6 26	5 0	1 10								
28	We	6 28	4 59	2 12								
29	Th	6 29	4 58	3 13								
30	Fri	6 30	4 57	4 13								
31	Sat	6 32	4 55	5 14								

He will turn again, He who hath compassion for us.
He is gracious and merciful, slow to anger, and of great kindness.
Return unto Me, and I will return unto you.
Let him that thinketh he standeth take heed lest he fall.
He that believeth on the Son of God hath the witness in himself.
I will rejoice in the Lord; I will joy in the God of my salvation.
Him that cometh to Me I will in no wise cast out.
I know Mine own, and Mine own know Me.
By Me if any man enter in, he shall be saved.
Man shall not live by bread alone, but by every word of God.
Whatsoever ye do, do all to the glory of God.
As ye would that men should do to you, do ye also to them.
Hismercy is on them that fear Him, from generation to generation.
My times are in Thy hand.
The wages of sin is death; but, the gift of God is eternal life.
Wait on the Lord: be of good courage.
They that know Thy name will put their trust in Thee.
Watch ye, stand fast in the faith.
Grieve not the Holy Spirit of God.
Behold, the eye of the Lord is upon them that fear him.
The effectual, fervent prayer of a righteous man availeth much.
The Lord will be a refuge for the oppressed.
Blessed are the merciful, for they shall obtain mercy.
Give thanks at the remembrance of his holiness.
For we walk by faith, not by sight.
The Lord is merciful and gracious.
We which have believed do enter into rest.
Men ought always to pray, and not to faint.
The beloved of the Lord shall dwell in safety by him.
Hide me under the shadow of thy wings.
Bring forth therefore fruits meet for repentance.

He will turn again, He who hath compassion for us.
 He is gracious and merciful, slow to anger, and of great kindness.
 Return unto Me, and I will return unto you.
 Let him that thinketh he standeth take heed lest he fall.
 He that believeth on the Son of God hath the witness in himself.
 I will rejoice in the Lord; I will joy in the God of my salvation.
 Him that cometh to Me I will in no wise cast out.
 I know Mine own, and Mine own know Me.
 By Me if any man enter in, he shall be saved.
 Man shall not live by bread alone, but by every word of God.
 Whatsoever ye do, do all to the glory of God.
 As ye would that men should do to you, do ye also to them.
 His mercy is on them that fear Him, from generation to generation.
 My times are in Thy hand.
 The wages of sin is death; but, the gift of God is eternal life.
 Wait on the Lord: be of good courage.
 They that know Thy name will put their trust in Thee.
 Watch ye, stand fast in the faith.
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 For we walk by faith, not by sight.
 The Lord is merciful and gracious.
 We which have believed do enter into rest.
 Men ought always to pray, and not to faint.
 The beloved of the Lord shall dwell in safety by him.
 Hide me under the shadow of thy wings.
 Bring forth therefore fruits meet for repentance.



INDUSTRIAL HOME FOR GIRLS, ADRIAN.

Opened Aug. 1, 1881, for wayward or disorderly girls of ten to seventeen years. Managed mostly by women; all officers immediately in charge are women; Margaret Scott, Superintendent.

Eleventh Month.

NOVEMBER, 1891.

30 Days.

Day of Month.	Day of Week.	For Michigan				MOON'S PHASES.			D.	H.	M.
		Sun rises.	Sun sets.	Moon rises.		New Moon	1	0			22 eve.
1	S	6 33	4 54	6 16		First Quarter	9	2	46		morn.
2	Mo	6 34	4 53		sets	Full Moon	15	6	16		eve.
3	Tu	6 35	4 51	5 56		Third Quarter	23	2	26		morn.
4	We	6 36	4 50	6 34							
5	Th	6 38	4 49	7 30							
6	Fri	6 40	4 48	8 17							
7	Sat	6 41	4 47	9 22							
8	S	6 42	4 45	10 33							
9	Mo	6 43	4 44	11 48							
10	Tu	6 44	4 43		mor						
11	We	6 45	4 42	1 4							
12	Th	6 46	4 41	2 21							
13	Fri	6 48	4 40	3 38							
14	Sat	6 49	4 39	4 55							
15	S	6 50	4 39	6 14							
16	Mo	6 53	4 38		rises						
17	Tu	6 53	4 37	5 51							
18	We	6 54	4 36	6 43							
19	Th	6 55	4 35	7 43							
20	Fri	6 56	4 34	8 47							
21	Sat	6 58	4 34	9 52							
22	S	6 59	4 33	10 57							
23	Mo	7 0	4 33		mor						
24	Tu	7 1	4 32	0 1							
25	We	7 3	4 31	1 2							
26	Th	7 4	4 31	2 2							
27	Fri	7 5	4 31	3 2							
28	S	7 6	4 30	4 3							
29	Sat	7 7	4 30	5 7							
30	Mo	7 8	4 29	6 14							

My grace is sufficient for thee.
 Lord, lift up the light of thy countenance upon me.
 Draw nigh to God, and he will draw nigh to you.
 With the Lord there is mercy, and with him plenteous redemption.
 The Lord is our king; he will save us.
 Fear thou not, for I am with thee.
 Repent ye therefore, and be converted.
 The love of God constraineth us.
 Lo, I am with you always, even unto the end of the world.
 I the Lord thy God will hold thy right hand.
 Fear not; for I have redeemed thee; thou art mine.
 I, even I, am He that blotteth out thy transgressions.
 This poor man cried, and the Lord heard him.
 Thou knowest not what a day may bring forth.
 Ye are the temple of the living God.
 I will joy in the God of my salvation.
 If ye keep my commandments, ye shall abide in my love.
 I know whom I have believed.
 We are more than conquerors, through Him that loved us.
 The God of Jacob is our refuge.
 I will guide thee with mine eye.
 Godly sorrow worketh repentance to salvation.
 The Lord is the strength of my life; of whom shall I be afraid?
 If we suffer, we shall also reign with him.
 Let everyone that nameth the name of Christ depart from iniquity.
 Be not faithless, but believing.
 Believe on the Lord Jesus Christ, and thou shalt be saved.
 Be not weary in well-doing.
 Give not grudgingly, for God loveth a cheerful giver.
 The secret of the Lord is with them that fear him.



STATE SOLDIERS' HOME, GRAND RAPIDS.

Dedicated Dec. 30, 1886; cost, \$99,667.57, besides grounds \$16,000. Open to indigent soldiers or sailors honorably discharged from service in the Civil War. Inmates, about 425. Col. Byron R. Pierce, Manager.

Twelfth Month.

DECEMBER, 1891.

31 Days.

Day of Month.	Day of Week.	For Michigan				
		Sun rises.	Sun sets.	Moon rises.		
1	Tu	7 9 4 29	sets			
2	We	7 10 4 28	5 16			
3	Th	7 11 4 28	6 11			
4	Fri	7 13 4 28	7 14			
5	Sat	7 14 4 28	8 25			
6	S	7 15 4 28	9 39			
7	Mo	7 16 4 28	10 53			
8	Tu	7 17 4 28	mor			
9	We	7 17 4 28	0 6			
10	Th	7 18 4 28	1 20			
11	Fri	7 19 4 28	2 35			
12	Sat	7 20 4 28	3 51			
13	S	7 21 4 28	5 7			
14	Mo	7 22 4 28	6 25			
15	Tu	7 22 4 29	rises			
16	We	7 23 4 29	5 24			
17	Th	7 24 4 29	6 29			
18	Fri	7 25 4 29	7 35			
19	Sat	7 25 4 30	8 41			
20	S	7 26 4 30	9 47			
21	Mo	7 26 4 31	10 50			
22	Tu	7 27 4 31	11 51			
23	We	7 27 4 32	mor			
24	Th	7 27 4 32	0 51			
25	Fri	7 28 4 33	1 51			
26	Sat	7 28 4 34	2 53			
27	S	7 29 4 34	3 56			
28	Mo	7 29 4 35	5 4			
29	Tu	7 29 4 36	6 10			
30	We	7 29 4 36	7 15			
31	Th	7 30 4 37	sets			

MOON'S PHASES.				D.	H.	M.
New Moon.....	1	5	45	morn.		
First Quarter.....	8	11	13	"		
Full Moon.....	15	6	52	"		
Third Quarter.....	22	11	38	eve.		
New Moon.....	30	9	20	"		

As one whom his mother comforteth, so will I comfort you.
 He that overcometh shall inherit all things.
 It is your Father's good pleasure to give you the kingdom.
 God is our refuge and strength, a very present help in trouble.
 He doth not afflict willingly, nor grieve the children of men.
Examine yourselves, whether ye be in the faith.
 Preserve me, O God; for in thee do I put my trust.
 The Lord God will help me; therefore shall I not be confounded.
 Great peace have they which love thy law.
 It shall come to pass that before they call I will answer.
 But let him ask in faith, nothing wavering.
 Let us draw near with a true heart, in full assurance of faith.
Stand fast in the liberty wherewith Christ hath made us free.
 He will fulfil the desire of them that fear Him.
 Keep thy heart with all diligence; for out of it are the issues of life.
 The steps of a good man are ordered by the Lord.
 The same Lord over all is rich unto all that call upon him.
 The Lord preserveth all them that love him.
 Whosoever shall exalt himself shall be abased.
If we live in the Spirit, let us walk also in the Spirit.
 Be of good courage, and He shall strengthen thy heart.
 When thou doest thine alms, do not sound a trumpet before thee.
 What shall a man give in exchange for his soul?
 He that believeth on Me shall never thirst.
 By thy words thou shalt be condemned.
 Lay not up for yourselves treasures upon earth.
The seventh day is the Sabbath of rest, holy to the Lord.
 Whosoever will save his life shall lose it.
 To whom little is forgiven, the same loveth little.
 This is the Lord's doing, and it is marvelous in our eyes.
 If a man keep my word, he shall never see death.

THE

DETROIT JOURNAL YEAR BOOK.

A

Abbreviations.—There is so much danger of confusion between Col. and Cal., that Colo. is now the approved contraction for Colorado, and Calif. or Cfa. for California. The former (Calif.) is in use by the post-offices of that State and many of its newspapers. W. should not be written for either of the new States Washington or Wyoming, for obvious reasons.

Abel, Frederick L., late captain of the Detroit Light Guard, was born in 1856, at Cleveland, O., at seven moved to Milwaukee, and thence to Chicago; burnt out in the great fire, he returned to Milwaukee and came here from that city in February, 1872.

Went to Europe in 1875 and studied music in the Conservatory at Frankfort-on-the-Main, returning to Detroit in 1880. Joined the Detroit Light Guard April 3, 1882, and participated in three prize drills as a private, at Detroit, Grand Rapids and Cleveland, acting as 2d sergeant and left guide at the latter. At the end of his first year's enlistment was promoted to corporal, and received sergeant's warrant in a month from that date. Served as 4th, 3d and 2d sergeants and was acting 1st sergeant under Capt. Murphy. Was elected 2d lieutenant on Dec. 31st, 1884, 1st lieutenant Sept. 6th,

1886, and captain Sept. 17, 1888, which position he has held since. Captain Abel is engaged at the Detroit Conservatory of Music as an instructor, and is married and resides at 187 Charlotte avenue, Detroit.

Acre.—The English or statute acre (our acre) is 4840 square yards; the Scotch acre, 6150.4; Irish acre, 7840; Welsh, 4320; Cornish, 5760; Leicestershire, 2308¾; Westmoreland, 6760; Cheshire, 10,240. The English acre was originally considered to be as much ground as a yoke of oxen could plow in a day. The arpent, or French acre, used in early French surveys along the Detroit and St. Clair rivers, and still in use in Louisiana and the Province of Quebec, contained 48,400 square feet, by a royal edict of 1669. The common arpent had 40,000 square feet, the arpent of Paris 32,400.

African Languages.—A curious characteristic of these is that a prefix serves the same purpose that a suffix does in many other tongues. For example, we have England, English, Englishman; Spain, Spanish, Spaniard; but in one of the East-African dialects Uganda is the name of the country, Maganda of its language, and Waganda is the name of its inhabitants.

Alaska has been so far surveyed as to establish its length of coast-line at 18,211 miles, or almost twice the entire remaining ocean coast-lines of the United States. The country cost but \$7,000,000, and many thought this a waste of money; but the value of its fisheries alone in 1889 was \$3,000,000, and it is expected to yield that much revenue annually to the Government for the next twenty years. A thousand salmon, averaging ten pounds each,



have been taken in Sitka Bay in a single haul. The seal fisheries yield to the government \$317,500 annually, or enough to pay 4 per cent on the amount paid Russia for the country. A single island is said to be practically a mountain of ore, and to contain mineral wealth enough to pay off the whole of our national debt.

Alger, Gen. Russell A., was born at Lafayette, Medina county, Ohio, Feb. 27, 1836. His parents were of New England stock, and his great grandfather was a gallant soldier in the war of the Revolution. Young Alger was left fatherless and moneyless at a very early age, and sturdily attempted not only to earn

his own living but to help his mother. One of his earliest ventures was taking care of 20 cows at \$1.50 per week. Eight years he worked for the farmers in Ohio, one of his experiences being



service for a man for some years who made him labor from sun to sun, and charged him ten cents per hour for all time lost by sickness or any other reason. He taught school, his first experience being teacher of the boasted "toughest" school in northern Ohio. In 1857, he entered the law office of Wolcott & Upsord at Akron, and two years later he was admitted to the bar. He entered the law office of Otis & Coffinbury, Cleveland, and staid there for a few months. He then hung out his shingle at Grand Rapids, but when the war broke out, in 1861, he enlisted in the 2d Michigan Cavalry, and was soon after sworn in as Captain of Company C of that regiment. His military record as given in the military history of the state is as follows: "Captain 2d Cavalry, Sept. 2, 1861; Major, April 2, 1862; wounded and taken prisoner at Boonesville, Miss., July 1, 1862; escaped same day; Lieutenant-Colonel 6th Michigan Cavalry, October 16, 1862; Colonel 5th Michigan Cavalry, Feb. 28, 1863; wounded in action at Boonsboro, Md., July 8, 1864; Brevet Brigadier-General U. S. Volunteers

for gallant and meritorious service at Trevillian Station, June 11, 1864; Brevet Major-General U. S. Volunteers, June 11, 1865, for gallant and meritorious services during the war." After the war Gen. Alger entered the lumber business at Grand Rapids, and laid the foundation of that enormous business which he is now the head of. He then became a member of the firm of Moore & Alger of Detroit, and then the head of that of R. A. Alger & Co., and later the firm became Alger, Smith & Co. General Alger was the pioneer in the business of lumbering by steam, and from his little logging railway grew the Detroit, Bay City & Alpena R. R. In 1884 he was elected Governor of Michigan. He served for two years, and declined a renomination. In 1888 he was one of the leading candidates for the Presidency before the Republican Convention, and will doubtless be again presented by the Michigan delegation in 1892. His charity is as wide as the needs of the suffering, and while he freely gives of his abundance to all organized charities that come under his eye, his private beneficences have been for several years among the most marked of those of any in the state. In 1889, Gen. Alger was elected Commander-in-Chief of the G. A. R., and was actively instrumental in securing the 1891 National Encampment for Detroit.

Almanacs.—The first were made by Arabian scholars, as their name hints. A similar work, however, now in the British Museum, belongs to the time of Rameses the Great, 1200 B. C. It was written with red ink on papyrus, for six years' use, and included dates of religious rites, fates of persons born on certain days, and notes of planetary influence on business ventures. A French "Almanac of Popular Traditions" is still issued annually, from the Breton Calendar, in which one may learn that June 11 is still the longest day with that primitive people, while each of the first twelve days of the year infallibly foreshows the weather of each of its months. If weather goes wrong, there are many saints to apply to for remedy. St. Valentin and St. Marina replace Neptune, and order about the winds; Mikail gives fine days; Milion preserves from hail and drouth; Nonna and Pern give rain; and Sylvester—generally connected in Germany with red noses—prevents white frosts, while Kler and Barba act as lightning-conductors. No

fewer than seventy-six saints divide the duties of Æsculapius, among them Mark, who is supposed to pay special attention to snake and mosquito bites; Ceres is represented by eight, and Lucina is the prototype of four. Pie-crust rises at the bidding of Riwal; Anton and Kristina fatten pigs, and Jill cures them when they are ill; mad dogs flee before the names Tujen and Bienzi; Isidore destroys moles; and Herve is the declared enemy of wolves. Things must get mislaid a good deal in Brittany; for three saints—Goneri, Pergat, and Jann Diarc'hem—have nothing else to do but look out for them. Ninoc makes children grow fast; Dider and Glaoda teach them to speak; and Li-bouban, Tujen, and Lijer see that they walk early. The last is a saint (Leger) who makes horses run in England. Perhaps out of the whole calendar St. Pezr (Peter) has his hands fullest, for he has to fill all the hives with honey and all the nets with fish, besides giving full broods of chickens to the hens and in his odd moments charming away rheumatics and lumbago. The Almanac also contains a collection of Normandy beggars' chants, with music, fairy tales, popular riddles, and the addresses of all recognized "folkloristes" throughout the world.

Alphabets.—A recent arrangement of oriental alphabets in the King's Library, British Museum, led to the publication of some interesting facts. The Babylonians and Assyrians used about 600 characters, thought to have been borrowed from the Akkadians, or earlier inhabitants of Chaldea, who used them to represent words, as the Chinese use their signs. Some of the East-Indian writings shown date back to 250 B. C. Egyptian manuscripts show that when the people became Christians they dropped the native characters and took the Greek letters, adding six from the popular or Demotic alphabet to indicate sounds not represented by the Greek. The Coptic or later Egyptian writing is confined to Christian literature, of which the oldest fragments yet found in it are as recent as the fourteenth century A. D.

Aluminum—This metal is one of the most remarkable in the whole catalogue, having a tensile strength of 40,000 lbs. to the square inch, extreme lightness (specific gravity $2\frac{1}{2}$ against gold 19), electric conductivity eight times that of iron, malleability and ductility almost equal to gold, and

elasticity much like silver, and is exceedingly sonorous, especially in bars; is not affected by air, water, or most acids. It long resists corrosion, can be hardened like steel, and being the lightest metal for its strength that is known, it is thought by some that the problem of a flying machine will be solved by it. A cubic foot of it weighs only 162 lbs., against gold 1231.2 lbs. It is rarely found in the metal, but every clay-bed is a mine of it, and it is now separated by a cheap and rapid chemical process. A pound of it was worth nearly \$200 a few years ago, but only \$10 two years ago, and now but \$1, while it can be produced for a few cents. It is likely to supersede other metals in a great variety of manufactures.

American Newspaper Publishers' Association.—An organization of the proprietors and business managers of the leading daily newspapers of the United States. The society has a New York office at room 206 Potter building. The initiation fee is \$20, and the annual dues \$50. Mr. James W. Scott of the Chicago Herald is president, and Mr. G. M. Brennan is the manager in charge of the office. The association was first formed in February, 1887, at Rochester, New York. It has recently extended its privileges to the smaller papers of the country, particulars of which can be learned by those interested, by addressing Mr. Brennan, the manager.

Ancestors.—An interesting calculation has been made, showing that from the birth of Christ to the year 1867—56 generations, counting three to the century—139,235,017,459,534,976 ancestors might be required for any person living in the latter year. The astronomer Proctor calculated that if from a single pair, for 5000 years, each husband and wife had married at 21 years of age and there had been no deaths, the population of the earth would be 2,199,915 followed by 144 ciphers. It would require to hold this population a number of worlds, the size of this, equal to 3,166,526 followed by 125 ciphers. The human mind has no power of conceiving such enormous numbers. It is a task even to write them.

Apron.—This is a word said to have originated in a queer mistake, the accidental printing of a *napperon*, French for napkin, as "an apperon," which was corrupted into apron. In some English counties the old form is still used.

Arithmetic, Humors of.—Dr. Holmes: "I always fancy I can hear the wheels clicking in a calculator's brain. The power of dealing with numbers is a kind of 'detached-lever' arrangement, which may be put into a mighty poor watch." Pet Marjorie: "But 7 times 9 is devilish, and what Nature itself can't endure!" A Swiss philosopher: "Man is the whole of arithmetic, compacted however out of all numbers; he can therefore produce numbers out of himself. . . . Arithmetic is the truly absolute or divine science. Theology is arithmetic personified." The National Journal of Education: "The number of the inhabitants of the world who use the English tongue is estimated at one billion; Hindustanee the same; while the Chinese-speaking population is twice as many as these combined, or about four billions." A Detroit dispatch: "Sixteen billions of logs are lying in Upper Michigan" (it was the dispatch that was lying). Detroit paper: "There are 12,000 applications for consulates. 12000 | 1200 | .01." Life: "How many seconds are there in a duel? How many minutes in a previous meeting? How many degrees in a college? How many barrels in a political campaign? How many feet make a book-agent tired? How many pounds make a prize-fight? How many sins make one scruple? How many perfumes make one scent? Reduce seven Jacks to gills. Reduce three gallons of whisky to drunks. Add one oyster to each plate of soup in a church festival, and determine the rise in price per plate." Dr. Ray Palmer the hymn-writer:

THE SUM OF IT ALL.

The boy that by addition grows,
And suffers no subtraction,
Who multiplies the thing he knows,
And carries every fraction,
Who well divides his precious time,
The due proportion giving,
To sure success aloft will climb,
Interest compound receiving.

Art-works.—The countries admitting works of fine art free of duty are Austria, Belgium, Denmark, France, Germany, Great Britain, Greece, Holland, India, Italy, New South Wales, Sweden, and the province of Victoria. Our own country still imposes customs duties upon paintings and statuary, 15 per cent *ad valorem* under the new tariff, against 30 as before, with several exemptions. Engravings, etchings, and photographs, 25 per cent.

Arndt-street Presbyterian Church, Arndt-st., between McDougall and Elmwood aves., two miles N. E. from City Hall, has seats for about 200, was built for mission S. S. and preaching in 1884, and enlarged in 1889; value of property, \$3000. It is proposed to move soon to a better site. The church has not yet been fully organized,



REV. G. HUYSER.

but about 40 are waiting to become members. Services Sunday at 10:30 and 7:30 (7:45 summer), S. S. 2:45. Free seats and cordial invitation. Rev. Gerrit Huyser, minister in charge, was born at Ridderkerk, Holland, Feb. 28, 1838, came to Detroit 1851, graduated Olivet College 1867, studied theology with Dr. Geo. Duffield, was ordained June 2, 1869, ministered in Wisconsin and Illinois, and took his present charge in March, 1889. His taste for linguistic studies, and familiarity with most Teutonic and Romanic languages, specially fit him for this field. Residence, 735 McDougall-av.; "latchstring" always out.

Asbury M. E. Church, Ferry ave. and Dubois st., Detroit, was organized about 1882 as Garfield Mission by the Central church, and removed to present location Sept., 1885. Sittings in meeting house, about 225; valuation, \$4500; membership, about 170; Sunday-school, about 250; infant class, 120. Sunday services 10:30 and 7:30; S. S. 2:30; general prayer-meeting Wednesday, 7:30; young people's meeting Friday, 7:30. Rev. C. E. Mitchell, pastor 1886-90, is now a student at Boston University. Present pastor, Rev. Jas. H. Williams, 638 Grandy ave.

Asteroids.—About 300 asteroids have been discovered. To Aug. 25, 1889, 287 had been found and numbered, and many of them named.

Bank Notes, Portraits on.—The following appear upon our national currency: \$1 notes, Washington; \$2, Jefferson; \$5, Jackson; \$10, Webster; \$20, Hamilton; \$50, Franklin; \$100,

Lincoln; \$500, Gen. Mansfield; \$1,000, DeWitt Clinton; \$5,000, Madison. On silver certificates—\$10, Rob't Morris; \$20, Com. Decatur; \$50, Edw. Everett; \$100, Monroe; \$500, Sumner; \$1,000, Marcy. On gold notes—\$20, Garfield; \$50, Silas Wright; \$100, Benton; \$500, Lincoln; \$1,000, Alex. Hamilton; \$5,000, Madison; \$10,000, Jackson.

Banks, the Great.—The capital of the Bank of England is \$72,765,000; Bank of Ireland, \$13,845,150; Bank of Scotland, \$7,500,000; Bank of France, \$36,500,000; Imperial Bank of Germany, \$30,000,000.

Belle Isle Park.—This is so far the only Detroit park of size yet improved and open to the public, though within the last year Clark Park at the west end has been purchased. Belle Isle, at the head of the Detroit river and commanding superb views on all sides, contains 670 acres, all of which is devoted to public purposes.



The tract was bought by the city in 1879, and cost \$200,000. About \$300,000 have since been expended for its improvement and maintenance, besides \$300,000 for the bridge. This is a superb work, 3134 feet long, including approaches, and was built in 1887-8. It is thrown across from the foot of Frontenac avenue, Detroit, nearly at right angles with the channel, and 22 feet from the water to the bridge-floor. There are 12 spans—a fixed span next the mainland, 156 feet long, then a pivot-draw span of 318 feet, followed by ten fixed spans each of 156 feet. Each span consists of three trusses, each carrying a wagon and street-car way 24 feet wide, and two sidewalks of 8 feet each. The draw-span is moved by steam power, and when open gives two passage-ways for vessels, each of 125 feet.

Bells.—The great bell of Moscow, "Czar Kolokol," cast 1733, is computed to weigh about 440,000 lbs., or

220 tons. The largest in actual use is also in Moscow, and weighs 128 tons. Other big bells: Kioto, Japan, 83 tons; the new "Kaiserglocke," Cologne Cathedral, 25; Notre Dame, Paris, 17; Sens Cathedral, 16; "Big Ben," Westminster, London, over 13; Amiens Cathedral, 11; "Great Peter," York, Eng., 10; "Great Tom," Oxford, 7. A chime of bells regularly contains five to twelve; less than five are called a peal. If the bells are stationary and struck by hammers, they more properly constitute a carillon, which may have 40 to 50 bells. The Angelus bell, otherwise the Ave, Ave Maria, Ave Mary, Gabriel, or Lady bell, is rung in Catholic countries morning, noon, and evening, for recitation by believers of the three texts and salutation, "Ave Maria" or "Hail, Mary" in memory of the annunciation to the Virgin by Gabriel of the coming incarnation. The Elevation or Sanctus, and the Mass, Sacring, or Saints' bell, are small bells rung at intervals during the celebration of the mass.

Bennett School Law.—The following is the main provision of the famous Wisconsin act, which has evoked very powerful and persistent opposition, especially from the German Lutherans and Catholics. Except, however, the requirement for teaching in English, it has been substantially the law of that State for years:

Every person having under his control a child between the ages of seven and fourteen years shall annually cause such child to attend some day-school for a period not less than twelve weeks; provided that any such child shall be excused from attendance on its being shown that the person so neglecting is not able to send such child to school, or that instruction has otherwise been given for a like period in the elementary branches commonly taught in the public schools. No school shall be regarded as a school under this act unless there shall be taught therein, as part of the elementary education of children, reading, writing, arithmetic, and United States history in the English language. No child under thirteen years of age shall be employed or allowed to work for any person, company, firm, or corporation at labor or service in any shop, factory, mine, store, place of manufacture, business, or amusement, except that the judge of the county court may grant a permit for any child over ten years to be so employed, on proof that such child can read and write the English language, and that its parents are needy and its labor is necessary for the support of the family.

Berlin has 1,530,000 population by the latest returns, which is the population of New York City, pretty nearly. Berlin has about 175,000 people in its suburbs.

Bethania (Evangelical Lutheran) Church, V. A. C., Detroit, was organized Feb., 1889, successor of Trinity Ev. Luth. church, occupying chapel corner Pulford and Meldrum aves. The present church-edifice was consecrated Nov. 10, 1889; seating capacity, about 800; value of property, \$9000; voting members, 63; families, 120.



REV. R. SMUKAL.

Services on Sunday 10:30 and 7:30, Wednesday at 7:30 during Advent and Lent. Pastor R. Smukal was born in Germany Sept. 21, 1861, and came with his parents to America in 1864; entered the ministry Aug. 19, 1883, and served the churches of his faith at Iron Mountain and Pilot Knob, Mo., and came to his present pastorate Aug. 8, 1888. Residence, 888 Meldrum ave.; calls at any time.

Births.—Some interesting statistics have been collected. In European countries there is a steady overplus of boys at birth, the ratio being 102–106 to 100 girls,—in most countries 105, in England, Wales, and Wurtemberg 104, in Austria 106, Italy 107, and Roumania and Greece 111, though these figures are for but few years and not altogether trustworthy. Still-born boys are in even greater excess, 128 in Russia to every 100 still-born girls; 140 in Italy. Still-born constitute 3 to 4 per cent of all births. Illegitimate births are about 7 per cent—in Prussia 7.9 in 1880, but in Frankfort 10, Berlin 13.7, Breslau 15.9, Dantzig 17, Königsberg 18.9, and Bonn 22; of Jewish mothers in Prussia, 1875–81, 2.73 per cent.; Roman Catholics, 5.64; Evangelical Protestants, 8.85. In Bavaria under improved marriage laws, the percentage dropped from 22.47 in 1865 to 16.47 in 1877. Twins or more children occur in one to two of 100 births; the ratio of still-born is much greater in these cases. Three cases of five children at a birth have been recorded during this century in Prussia alone. In that country the average birth-rate per 1000 inhabitants 1865–78 was 37.8, but in 1871, the year

after the Franco-Prussian war, only 33.7, recovering to 39.7 the next year. War, hard times, and dear food always depress the birth-rate. February is the greatest birth-month, from most marriages in May; and the next is September. Density of population does not affect the rate, and there is little difference between city and country; in Prussia, 1872–81, the figures for them respectively were 40.9 and 41.2 per 1000. Annual births per 1000 range from 25.8 in France and 26.7 in Ireland to 49.5 in Russia.

Bible Books.—Genesis is the book of beginnings; Exodus, of the exode or departure; Leviticus, of atonement; Numbers, of sojourn; Deuteronomy, of the second or twice-given law, as its Greek name indicates; Joshua, of conquest; Judges, of the judges of Israel; Ruth, a pastoral idyl; 1 and 2 Samuel, of the kingdom; 1 and 2 Kings, of royalty; 1 and 2 Chronicles, of "things omitted," Paraleipomena in the Septuagint; Esther, the romance of providence; Psalms, a little Bible (Luther), epitome of all Scripture (Athanasius), the treasury of David (Spurgeon); Proverbs, of wisdom; Ecclesiastes, the Preacher, as its Greek title denotes; Song of Solomon, the Song of Songs in the Revised Version, old name the Canticles, the Holy Song (Luther); Isaiah, the Gospel of the Old Testament; Jeremiah, book of warning; Lamentations, a funeral dirge; Ezekiel, the prophet of the iron harp; Hosea, an Ephraimite book; Joel, pioneer of the prophets; Jonah, prophet of overthrow; Micah, of controversy; Nahum, burden of Nineveh; Habakkuk, prophet of faith; Zephaniah, compendium of all prophecy; Zechariah, prophet of the Advent; Malachi, "My Messenger." Matthew is the Hebrew Gospel; Mark, Gospel of the works of Christ; Luke, of redemption; John, the Main Gospel (Origen), the Gospel of Gospels, the Holy of Holies in the New Testament (Dr. Schaff), the diamond among Gospels (Lange), the heart of Jesus (Emerti); Acts, the Gospels applied, the first church history, book of witness; Romans, chief book of the N. T. and the purest Gospel (Luther), the profoundest book in existence (Coleridge), cathedral of the Christian faith (Godet), epistle of righteousness; 1 Corinthians, of wisdom; 2 Cor., of comfort; Galatians, of faith, an "Apologia pro Vita Sua, personal and doctrinal vindication" (Schaff); Ephesians, epistle of the

heavenlies, the Song of Songs in the N. T. (*Ibid.*), the epic (Dr. Pierson) or lyric of the N. T.; Philippians, the disciples' balance-sheet; Colossians, companion of Ephesians; 1 and 2 Thessalonians, epistles of the second coming; 1 and 2 Timothy, of doctrine; Philemon, the idyll of the N. T.; Hebrews, the Leviticus of the N. T.; James, epistle of holy living; 1 and 2 Peter, "precious" epistles; 1 John, of light, love, and life; 2 John, tribute to womanhood; 3 John, of hospitality; Jude, of warning; Revelation or Apocalypse, book of the last days.

Blazer.—This word, now used for the bright-colored or striped loose coat usually worn by tennis- or cricket-players, originally applied only to the red jacket worn by a boat-club at St. John's College, Cambridge, Eng., where the term originated.

Blizzard.—A correspondent of London Notes and Queries says that this word, which most people account a pure Americanism, is well known in the midland counties of England, and is there used to designate anything blazing, blasting, blinding, dazzling, or stifling. Blizzer, blizzom, and blizzor have similar uses. Blizzared may mean blasted or withered, and "may I be blizzarded" is a familiar oath in these regions.

Books.—Among novels and kindred books whose scenes are laid in Michigan are Miss C. F. Woolson's "Anne" and "Jupiter Lights," Dean's "Heroines of Petoskey" (Petoskey), and Marion Harland's "With the Best Intentions"—all these at Mackinac; Cooper's "Oak Openings,"—the valley of the Kalamazoo; B. F. Taylor's "Theophilus Trent"—Southeastern Michigan; "The Puddelford Papers," by H. H. Riley, of Constantine; "Legends of Michigan," by F. J. Littlejohn, Allegan; "A New Home: Who'll Follow?" by Caroline M. Kirkland; "Shoepac Recollections," by O. S. Wilcox, Detroit; "The Fatal Secret," by Mrs. F. Gorton, of Fenton, ("Ida Greenwood"), "Little Venice," by Grace Denio Litchfield, in The Century for July, 1890, and since printed in a book, is located upon the St. Clair Flats, above Detroit. Dr. W. T. Harris, U. S. Commissioner of Education, thinks the ten best novels in all literature are "Wilhelm Meister," "Vicar of Wakefield," "Heart of Mid-Lothian," "Rob Roy," "Marble Faun," "Consu-

elo" and its sequel, "Romola," "Les Miserables," "Gulliver's Travels," and "Robinson Crusoe," excluding reluctantly "Ivanhoe," "Villa on the Rhine," and "Don Quixote." The ten best books, according to a recent test made chiefly in New England by the Springfield (Mass.) Homestead, an agricultural paper, are also all novels: "Ben Hur," "Ramona," "David Copperfield," "Ivanhoe," "Uncle Tom's Cabin," "Little Women," "John Halifax," "Looking Backward," "Jane Eyre," and "Adam Bede." Popular taste for fiction in the Northwestern States is represented by a large wholesale book-house in Chicago as about as follows: Roe, 1000; Dickens, 800; Mrs. Holmes, 342; Miss Alcott, 282; Scott, 232; Mrs. Stowe, 122; May A. Fleming, 110; Wallace, 100; Eliot, 84; Harland, 79; Thackeray, 74; Bulwer, 66; Mrs. Southworth, 61; Tourge, 54; Cooper, 52; N. Hawthorne, 50; Eggleston, 46; Crawford, 41; Stevenson, 40; Helen Hunt, 30; Mrs. Burnett, 18; Cable, Howells, and Stockton, 24 each; Black, 12; Blackmore, 10; Aldrich, 6; Collins, 5; Reade, 4; Fielding, 2; H. James, 1. A voting contest instituted by a leading London paper shows Miss Braddon to be the favorite novelist of the English public, Rider Haggard following 200 votes behind, and Walter Besant pushing him close.

Following are some of the titles called for at the Portland (Me.) Public Library: "Jane's Heirs" (Jane Eyre), "John Ingersoll" (John Inglesant), "Irving's Albraham" (Alhambra), "Illuminated Face" (Face Illumined), "Prohibition" (Probation), "Bulfinch's Agent Fables" (Age of Fable), "Patty's Reverses" (Patty's Perversities), "Little Lord Phantom" (Fauntleroy), "Silence of Dean Stanley" (Maitland), "Mona's Charge" (Mona's Choice), "Zigzag's Classic Wonders" (Zigzag Journey in Classic Lands), "Boots and Spurs" and "Boots and Shoes" (Boots and Saddles), "Mary's Lamb" (Mary Lamb), "Fairy Tails" (Fairy Tales), "Chromos [Camæos] from English History," "Noosie's Father" (Nuttie's Father), "Not in the Perspective" (Prospectus), "Sand Maid" (Sun Maid), "Lion and the Tiger" (Lady or Tiger), "Boy and Viola" (Roy and Viola), and "Prince of David's Palace" (Prince of the House of David).

Bridge, Detroit.—Several projects have been mooted for facilitating transit across the Detroit River, and at least

two companies are formed to throw a bridge from the American to the Canadian shore, between Detroit and Windsor, mainly for use of the railways. Dec. 10, 1888, a bill was introduced in the Federal House of Representatives, to authorize the construction of a high-level bridge, "to be in the clear above the highest masts," by the Long-span Bridge Company, of which the incorporators are understood to be John H. Miller of New York, James Andrews, A. Kennedy, and T. Rea, of Pittsburg, and Bryant Walker of Detroit. The bill has not become a law, and its passage is opposed by influential representatives of the shipping interests, with \$60,000,000 capital, passing a vessel by Detroit every seven minutes in the season of navigation, and 22,000,000 tons of commerce annually. Estimated cost, \$8,000,000. Another plan is to build a winter bridge, with only two piers in the river, and draw constantly open in time of navigation, one of these, over the main channel, to be 900 or 1000 feet long, among the longest ever made, and the other, on the Detroit side, 500 feet, having a total clear way of 1400 or 1500 feet. It is proposed to build this bridge from the foot of Twenty-fourth street, Detroit, where the river is but 2600 feet wide. This scheme is backed by the Peninsular Bridge Company, W. K. Muir President, Francis F. Palms Secretary, John Pridgeon, R. W. Gillett, H. C. Parke, James Millen, W. C. Colburn, Alex. McVittie, F. E. Kirby, Directors. It already has a franchise from the Canadian Government. Estimated cost, \$800,000. [See also "Tunnel."]

Bridges, Great.—One of the greatest events of the last year was the formal opening, March 4, by the Prince of Wales and a vast multitude of other dignitaries and the commonalty, of a new railroad bridge across the Frith of Forth, between Queensberry and Inverkeithing, Scotland. It is a cantilever bridge, 8991 feet, or nearly $1\frac{3}{4}$ miles, in length, and 150 feet above water. Besides approaches, the bridge proper is 5349 feet long; and the tops of the cantilevers are high as St. Paul's Cathedral, or 450 feet. They are three gigantic structures, each a diamond-shaped formation of steel girders and cross-pieces, like a huge latticed cage, the central one resting on a small rocky islet, without which the bridge could not have been built. It was almost

seven years in building, contains over 50,000 tons of the finest steel, cost about \$10,000,000, and as a feat of engineering is one of the modern wonders of the world. Other great bridges:

	Length, feet.	Greatest span, feet.
Tay Bridge,	10,780	245
Niagara Bridge.	808	808
Landore Bridge.	1,760	110
Crumlin Bridge.	1,800	150
Britannia Bridge.	1,511	460
Brooklyn Bridge.	5,862	1,600

The suspension bridge proposed over the Hudson river at New York City, according to published plans, will have a total length, including approaches, of 6500 feet; height of towers from high-water mark, 500; from deepest foundation, 690; of bridge above high water, over 135; length of each land-span, 1500; of middle span, 2850 in the clear; width, 86; railway tracks, 6 to 10; cables, 4; diameter of same, 48 inches; iron and steel in the structure, 60,000 tons; cost, exclusive of land damages, \$16,000,000. It is to cross from a point near Fourteenth street, in New York, to the meadows between Hackensack River and Bergen Hill, above Jersey City. On the New York side a great double-decked, thirty-track depot will be built.

Buddhism has twelve sects in Japan and thirteen in China.

Building Calculations.—One thousand shingles, laid four inches to the weather, cover 100 square feet of surface; five pounds of shingle-nails fasten them on. One-fifth more siding and flooring is needed than the number of square feet of surface to be covered, because of the lap in the siding and matching of the floor. One thousand laths cover 70 yards of surface; 11 pounds of lath-nails nail them on. Eight bushels of good lime, 16 of sand, and one of hair, make enough good mortar to plaster 100 square yards. A cord of stone, three bushels of lime, and a cubic yard of sand, lay 100 cubic feet of wall. Five courses of brick lay one foot in height on a chimney; six bricks in a course make a flue four inches wide and 12 long; and eight bricks in a course make a flue eight inches wide and 16 long.

Calendar.—The following neat "old-fashioned calendar" in modern phrase is contributed by Sophie E. Eastman to The Independent:

January brings the snow,
Winter's flag of truce; and lo!
As the lengthening days appear
On the dial of the year,
Sleigh-bells with their merry chime
Strike the hours for Father Time.

February brings the rain,
Beating on the window-pane;
Mimic lakes and shallow seas
Hide the marsh and flood the leas.

March brings breezes fierce and loud;
Now the giant oaks are bowed,
Yielding homage to the blast
As the wild wind hurries past.

April spreads her carpet green,
While behind their rustic screen
Tiny buds, in pleased surprise,
Lift their chalice to the skies.

May sends flocks and herds afield,
And the dandelions yield
Stores of gold along the mead,
Where the kine unheeding feed.

June brings lilies fair and tall,
Roses climbing o'er the wall;
Azure skies and berries sweet
Tempt the children's wandering feet.

Hot July, and mowers stand,
Scythe and rake on either hand;
While the farmer's loaded wain
Slowly threads the narrow lane.

August brings the cradled grain,
Veiling close the arid plain;
And anon the tireless bee
Hums his Benedicite.

Now September's lavish hand
Scatters plenty o'er the land;
Crimson peach and purple plum,
Pear and amber grape have come.

October binds her golden sheaves,
With scarlet glory tints the leaves.
The Harvest Moon prolongs her stay,
Enticed for once to brief delay.

On the hills a purple haze
Signals chill November days.
Nuts were garnered long ago,
As the practiced squirrels know.

Streams with crystal fetters bound,
Leafless trees and russet ground
Mark December's dreary round.
Christmas comes with wonted cheer,
Then we hail the glad New Year.

Calumet & Hecla Mining Company.—

One of the most massive and elaborate hoisting-plants ever built has been erected within a few months by this company, at Calumet, Mich. It has three triple-expansion, vertical inverted beam-engines; cylinders of 18, 23½, and 48 inches diameter, all 7-foot-6-inch stroke; shaft hollow, 29 feet long, 22½ inches diameter, bearings 22 by 40 inches; fly-wheel, 30 feet diameter; five of the largest Belpaire boilers ever built, each 34 feet 5 inches long, 90 inches diameter, weighing 86,000 lbs., and containing 201 three-inch tubes 16

feet long; fire-boxes, 9 feet by 4 feet 7 inches; working pressure, 185 lbs. per square inch. Forty-six of these boilers are in service or ordered. Engine-house 112 by 68 feet, boiler-house 76 by 68. Hoisting-drum conical, 27 feet diameter at one end, 14 feet 7 inches at the other, carrying 5500 feet of 1½ inch wire rope. An automatic device varies its speed from 30 to 45 revolutions a minute, securing uniform rate of hoist.

Calvary Presbyterian Church, Detroit, is situated on Michigan avenue, looking up Maybury avenue, two miles from the City

Hall. The building was erected in 1887, seats 700 and including its site represents a property of about \$30,000. Membership of church, 450; of Sunday-school, 600. Services of some kind occur nearly



REV. GEO. W. BARLOW.

every evening, and the doors are open to all. Present officers of the church: Elders, Chas. T. Duffie, John Munro, W. M. Caldwell, Wm. McKerrow, W. T. Winchester; Trustees, S. A. Plumer, Geo. Mead, John Mead, Geo. W. Stringer, Jas. Meston, W. R. Montgomery, W. T. Hurd.

Rev. Geo. W. Barlow, pastor of Calvary church, was born in La Gro, Wabash Co., Ind., Jan. 3, 1838; was educated at Wabash College and Lane Seminary, entered the ministry in the spring of 1868, and became pastor here in Oct., 1879, serving the church acceptably for now eleven years. Residence, 88 Maybury ave.; calls at any time.

Candle-power.—This, so often used nowadays as the unit of light, is the amount produced by a sperm candle one-sixth of a pound in weight, burning 120 grains an hour.

Cannon.—Some reckless statements have been published about great guns made or projected; but the largest yet cast is an English 180-ton Armstrong gun 39 feet long, calibre 17 inches, throwing a 2000-lb. shot with 700 lbs. of powder through 29 inches of

wrought iron. Krupp's largest gun is said to be of 150 tons, nearly 48 feet in length, with 1223 lbs. of powder hurling a 3500-lb. projectile through 60 inches of iron. His 139-ton and 119-ton guns report still better results, though lighter. The most remarkable gun yet cast in this country was made last year (1890) at the Watervliet foundry, of but 10-inch bore, but capable of throwing a 560-lb. shot with 230 lbs. powder 12 to 15 miles, and to penetrate about 24 inches of armor-plate. The rage for huge cannon is dying out, but designs for a 156-ton cannon are understood to be held in the royal foundry at Woolwich, Eng.

Capital of the United States.—It was at Philadelphia Sept. 5, 1774, to Dec. 20, '76; Baltimore, to March 4, '77; Philadelphia again, to Sept. 27, '77; Lancaster, Pa., three days, to Sept. 30, '77; York, Pa., to July 2, '78; Philadelphia, to June 30, '83; Princeton, N. J., to Nov. 20, '83; Annapolis, Md., Nov. 26-30, '84; Trenton, N. J., to Jan. 11, '85; New York, to '90; Philadelphia, 1790-1800, when the capital was finally removed to Washington.

Capitals, State.—The Government Geological Survey has determined the general elevation of 34 of them above the sea, as follows: Annapolis, Md., 4 feet; Boston, Mass., 7; Providence, R. I., 10; Albany, N. Y., and Sacramento, Cal., 30; Trenton, N. J., 38; Hartford, Conn., and Dover, Del., 39; Augusta, Me., and Newport, R. I., 48; Richmond, Va., 84; Montgomery, Ala., 132; Salem, Ore., 137; Concord, N. H., 252; Little Rock, Ark., 266; Columbia, S. C., 296; Raleigh, N. C., 300; Harrisburg, Pa., 319; Nashville, Tenn., 445; Montpelier, Vt., 484; Charlestown, W. Va., 517; Austin, Tex., 518; Springfield, Ill., 594; St. Paul, Minn., 702; Indianapolis, Ind., 722; Columbus, O., 783; Des Moines, Io., 840; Madison, Wis., 848; Lansing, Mich., 852; Topeka, Ks., 884; Atlanta, Ga., 1050; Lincoln, Neb., 1155; Carson City, Nev., 4630; Denver, Colo., 5175. The capitals of the new States are Bismarck, N. D., Pierre, S. D., Helena, Mont., Olympia, Wash., Boise City, Id., and Cheyenne, Wyo. The capital of Arizona was removed in February, 1890, from Prescott to Phoenix, a city of 8000 and the seat of justice for Maricopa county. A bill has been passed by the Territorial Legislature to change the capital of Oklahoma from Guthrie to Oklahoma City.

Cars.—A surprising number and variety of railroad cars are now made. The following are enumerated in the "Car-builders' Dictionary": Baggage, boarding, box, buffet, caboosc, cattle or stock, coal, derrick, drawing-room, drop-bottom, dump, express, platform or flat, gondola, hand, hay, hopper-bottom, horse, hotel, inspection, lodging, mail, milk, oil, ore, palace, passenger, pay, post-office, push, portal, refrigerator, restaurant, sleeping, sweeping, tank, tip, tool or wrecking, and three-wheeled hand-cars. Statistics of the more common:

CLASS.	Length, ft.	Weight, lbs.	Price.
Platform car.	34	16,000-19,000	\$380
Freight or box.	34	22,000-27,000	550
Refrigerator.	30-34	28,000-34,000	860-1,100
Passenger.	50-52	45,000-60,000	4,400-5,000
Draw'g-room	50-55	70,000-80,000	10,000-20,000
Sleeping.	50-70	60,000-80,000	12,000-20,000
Street.	16	5,000-8,000	800-1,200

The capital stock of the Pullman Palace-car Company has grown to \$25,000,000, which at recent quotation of 215 represents a value of \$53,750,000.

Cass-avenue M. E. Church, on Cass and Selden aves., Detroit, Mich., occupied in 1883 its present chapel on Selden

ave., and awaits the larger building to be. Value, \$25,000; capacity, 350; membership of church, 300; services: Sunday 10:30 and 7:30; Bible-school 2:30; prayer-meeting. Wednesday eve; Epworth League, Friday evening.



REV. C. T. ALLEN.

Rev. C. T. Allen, pastor, was born in Sharon township, Washtenaw Co., Mich., Sept. 8, 1841, was a Federal soldier in the War of the Rebellion, entered the ministry Sept. 8, 1868, and came to the Cass-ave. church Sept., 1889. Present residence, 883 Third ave.

Census.—The numerous shortcomings of the census taken last year seem the more surprising, in view of the iron-clad oath which every enumerator had to take, as follows:

I, ———, an enumerator for taking the Eleventh Census of the United States, do solemnly swear (or affirm) that I will make a

true and exact enumeration of all the inhabitants within the subdivision assigned to me, and that I will also faithfully collect all other statistics therein, as provided for in the act for taking the Eleventh Census, and in conformity with all lawful instructions which I may receive, and will make due and correct returns thereof as required by said act.

Among curiosities of the census: In the small town of Parish, Oswego Co., N. Y., it found 13 families with a total of 195, or an average of 15 per family. One had 29, the offspring of two wives; the other children, ranging from 10 to 18 in a family, had but one mother in each. Albina, a town in Oregon, shows a percentage in growth in the amazing figure of 3469.23, or almost 35 times its population of 1880. It had 143 people then, 5104 in 1890.

[For statistics of the census, see Appendix.]

Central Methodist (First Meth. Episc.) Church, Detroit, is the oldest Protestant church in the city, lineal descendant of the earliest one organized in Michigan, and the only one which can show a charter dating from Territorial days. It had its beginning in 1810, was incorporated 1822, and has erected for its own use four church edifices in Detroit,

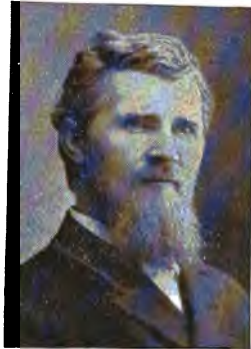


REV. W. W. RAMSAY.

the last three on Woodward-ave., northeast corner of Congress-st., southeast corner of State, and northeast corner of Woodward and Adams aves. The buildings were erected soon after the union, 1864, of the First and Second churches, and the name of Central M. E. Church was then settled as that of the new building. The chapel was completed in 1865, cost \$28,000, and seats 500; the church in 1867, at a cost of \$92,000, seating 1200; parsonage in 1883, cost \$12,000. The grounds covered by these three structures cost only \$13,900, but if now vacant would perhaps command as much as the entire property has cost. The society has been the foster-mother of nearly every other M. E. church in Detroit, and has always and widely been noted for its large gifts to the general benevolences of the church. Its work is fully sys-

tematized, with various missionary and benevolent organizations, including an Epworth League of young people, and it has the distinction of being the first Protestant church in the city to establish a young people's prayer-meeting and Young People's Society. The Central Mirror, a monthly paper, is the organ of the church. The Rev. W. W. Ramsay, D. D., after filling important pastorates in Cincinnati, Dayton, Akron, Erie, Covington, Pittsburg, and Ann Arbor, is serving the third year of his second pastorate with this church. At his request no biographical notes are added.

Central Church of Christ, Detroit, has long worshiped in an old church building on Washington-ave., but will soon remove to a fine new structure on Cass Park, with about 700 sittings and a total property of \$35,000. Membership, about 300. Services at usual hours on Sunday, with free seats and cordial welcome.



REV. W. B. THOMPSON.

Pastor W. B. Thompson was born in Richland Co., O., Feb. 21, 1848, became a minister of the gospel in June, 1874, and pastor of this church July 8, 1883.

Central Presbyterian Church, Detroit, was founded by Scotch residents of Detroit Nov. 10, 1842. Its first building, now occupied on Washington ave. by the Church of Christ, was erected in 1844. It became connected with the Canada Presbyterian Church in April, 1845 and built its present church on Farmer st. in 1871. Instrumental music was intro-



REV. J. F. DICKIE.

duced the next year. Membership, 505; Sabbath-school, 350; average yearly revenue, \$5000. Two young peoples' societies, literary and Y. P. S. C. E., are important factors; also the Ladies' Aid Society. The first pastor was Rev. David Inglis. The present pastor, Rev. Jas. F. Dickie, born at Kilmarmock, Scotland, Nov. 13, 1845, was licensed to preach July 13, 1869, became at once pastor of St. Thomas' church, Greenock, Scot., pastor of St. Andrews' church, Berlin, Ont., Feb. 13, 1872, and of Central church April 13, 1879. Residence, 174 Lafayette ave.; at home daily 1 to 2:30 p. m.

Charley Ross Case.—This continues still occasionally to engage the public mind, and reports are now and then heard that the boy, now if alive a young man grown, has been found. But a short time ago another groundless story of the kind was started, the supposed youth being located in Boston. July 1, 1874, Mr. Christian K. Ross, of Germantown, a part of Philadelphia, returned from a few weeks' visit to Atlantic City, and found his two youngest children, Walter and Charley, missing, the latter four years of age. He learned upon inquiry that two strangers, passing his house with horse and wagon, had tempted the boys successfully with a ride. Walter was abandoned on the road about eight miles away, but Charley totally disappeared. His abductors however opened correspondence with the father, to obtain a large ransom for his son. Upon advice of the authorities and his friends, he refused to pay this, but joined in the offer of large rewards for recovery of the child and punishment of the kidnappers. The Mayor of Philadelphia offered \$20,000 reward, and a very general interest was taken in the case throughout the country; but the lost child was never found. On the night of Dec. 13, of the same year, two burglars were killed in the attempt to rob the house of Judge Van Brunt, near New York City. One of them lived long enough to say that he was Joseph Douglas and the other Wm. Mosher; that they had stolen Charley Ross, and that Douglas, the burglar killed instantly, was the only one who knew where the boy was. Walter Ross was brought to view the bodies, and fully identified them. The secret of Charley Ross's fate probably died with them.

Chemical Substances.—Common and scientific names: Aqua fortis, nitric acid; aqua regia, nitro-muriatic acid; blue vitriol, sulphate of copper; cream of tartar, bitartrate of potassium; calomel, chlorid of mercury; chalk, carbonate of calcium; salt of tartar, carbonate of potassa; caustic potassa, hydrate of potassium; chloroform, chlorid of gormyle; common salt, chlorid of sodium; copperas or green vitriol, sulphate of iron; corrosive sublimate, bichlorid of mercury; diamond, pure carbon; dry alum, sulphate of aluminium and potassium; Epsom salt, sulphate of magnesia; Ethiop's mineral, black sulphid of mercury; fire damp, light carbureted hydrogen; galena, sulphid of lead; Glauber salt, sulphate of sodium; glucose, grape sugar; Goulard water, basic acetate of lead; iron pyrites, bisulphid of iron; jeweller's putty, oxid of tin; king's yellow, sulphid of arsenic; laughing gas, protoxid of nitrogen; lime, oxid of calcium; lunar caustic, nitrate of silver; mosaic gold, bisulphid of tin; muriate of lime, chlorid of calcium; nitre or saltpetre, nitrate of potassa; oil of vitriol, sulphuric acid; potash, oxid of potassium; realgar, sulphid of arsenic; red lead, oxid of lead; rust of iron, oxid of iron; sal ammoniac, muriate of ammonia; slacked lime, hydrate of calcium; soda, oxid of sodium; spirits of hartshorn, ammonia; spirit of salt, hydrochloric or muriatic acid; stucco or plaster of Paris, sulphate of lime; sugar of lead, acetate of lead; verdigris, basic acetate of copper; vermilion, sulphid of mercury; vinegar, acetic acid (diluted); volatile alkali, ammonia; water, oxid of hydrogen; white precipitate, ammoniated mercury; white vitriol, sulphate of zinc.

Chicago, under its latest annexations, is about 24 miles long from north to south, and 5 to 10 miles wide, covering about 174½ square miles, or 111,680 acres. The three divisions separated by the river and its branches are connected by 63 swing-bridges and two tunnels. There are 2047 miles of streets, of which 628 are improved. The public parks have 59 miles of drives, including the boulevards. Lincoln Park contains 250 acres; Garfield and Douglas, each 185; Humboldt, 200; Jackson and Washington combined, 957; total, including several smaller parks, about 2000 acres. The infant Chicago covered 2½ square miles 45 years ago. Its population in 1840 was

5752; in 1850, 34,437; in 1890, by the census, 1,101,263.

Child-growth.—A child in its fourth year should be about 3 feet high, and weigh 28 lbs. or more; sixth year, 3½ feet and 42 lbs.; eighth, 4 and 56; at 12 years, 5 and 70. With the addition of 3 or 4 inches in height should come an added weight of 26 lbs. A young person of 5½ feet should weigh about 112 lbs.; 5 feet 8 inches, 126; 5 feet 10 inches, 140; 5 feet 11, 154; 6 feet, 168. Growth is very irregular in children and young generally; perhaps two inches may be gained in two months, and for the next 10 months not another inch, even to the age of 12 years. While growth is thus rapid fatigue is readily produced; during the pause weight is gained, and work or training can go on again.

Chinese.—The population of China-town, San Francisco, is about 24,000, or 2000 more than in 1880. About 10,000 more Chinese are elsewhere in California.

Christ Church, Jefferson ave., Detroit; parish organized May 26, 1854; chapel erected 1857 and church-building 1860;

value of property \$98,600; sittings 926, and 260 in chapel; communicants, 800; 12 parochial guilds; vested choir, under Mr. F. A. Dunster, organist and choirmaster. Rector, Rev. Joseph H. Johnson;



REV. J. H. JOHNSON.

assistant, Rev. John W. Thrush. Mr. Johnson was born in Schenectady, N. Y., June 7, 1847; educated at Williams College and the General Theol. Sem. in New York; was ordained Deacon July 29, 1883, and Priest July 29, 1884. After serving parishes in Ulster Co., N. Y., Bristol, R. I., and Westchester, N. Y., he was called to his present pastorate.

Christian Socialism, as now organized in this country, is mainly an outgrowth of the remarkable Bellamy book, "Looking Backward." It is defined by its chief American promoter as "the spirit of the Socialism of the New

Testament and of the New-Testament church. In man's relations to God, Jesus Christ preached an *individual* gospel; accordingly, in their relations to God, Christ's disciples must be individualists. In man's relations to man, Jesus Christ preached a *social* gospel; accordingly, in those relations, his disciples must be Socialists." Its declaration of principles, accepted in Boston April 15, 1889, affirms its objects to be, "(1) To show that the aim of Socialism is embraced in the aim of Christianity.

(2) To awaken members of Christian churches to the fact that the teachings of Jesus Christ lead directly to some specific form or forms of Socialism; that, therefore, the church has a definite duty upon this matter, and must, in simple obedience to Christ, apply itself to the realization of the social principles of Christianity." Its special demand is for "a reconstructed social order, which, adopting some method of production and distribution that starts from organized society as a body and seeks to benefit society equitably in every one of its members, shall be based on the Christian principle that 'we are members one of another.' While recognizing the present dangerous tendency of business towards combinations and trusts, we yet believe that the economic circumstances which call them into being will necessarily result in the development of such a social order, which, with the equally necessary development of individual character, will be at once true Socialism and true Christianity."

Church of Our Father (Universalist), West Grand Circus, Detroit, was organized Feb., 1879, incorporated Jan., 1880, and house of worship dedicated 1881. It is of stone, Gothic, seats 800, and with lot is worth \$75,000. Membership, 350; parish list, 300 families. Sunday services 10:30 and 7:30; Sunday-school at noon. Working departments—Ladies' Aid, Social-life Committee, Young



REV. LEE S. MCCOLESTON.

People's Guild, Lend-a-Hand, King's Daughters, Choral Society, Popular Lecture Course, Reading-room Association. Strangers cordially welcome, and invited to the reading-room, always open. Rev. Lee S. McCollester, pastor, born Westmoreland, N. H., June 5, 1859, graduated Tufts College 1881 and 1884, shepherded Claremont, N. H., and was thence called to this church Jan., 1889. Residence, 654 John R.; Tuesday evenings.

Church of the Covenant (Presbyterian), Detroit, had its beginning in a large union mission Sunday-school of more than 20

years ago, which became the Union Pres. ch., with Rev. L. R. Fox pastor, and somewhat recently took its present name. It has a handsome property at Russell and Napoleon streets worth over \$50,000, wholly free of



REV. CHAS. H. MCCASLIN.

debt. The church edifice was built in 1888, with 1300 sittings, 500 in the auditorium and 800 in the Sunday-school, which numbers 500 to 600. Church membership, about 150. Services 10:30 and 7:30 Sunday; S. S. at 2:30; everybody welcome. Pastor Chas. H. McCaslin, b. Salem, Ore., June 13, 1864, graduated McCormick Theol. Sem., Chicago, April, 1890, and was promptly ordained and installed in his present pastorate. Residence, 145 Alfred st.; calls all forenoons except Monday, and Mon. and Wed. afternoons.

Churches.—The annual statistics of The Independent, published last year, show gains of Protestant churches in this country for the year reported as 668,108 members; Catholic churches, 421,745; total, 1,089,853. The Methodists gained 256,359; Baptists, 213,702; Lutherans, 98,040; Presbyterians, 48,899; Congregationalists, 16,377; Episcopalians, 9,466. Total members of Christian sects, 21,757,171, including 8,277,039 Catholics, who include entire populations of parishes in their counts. All are in 151,261 churches, with 103,303 ministers. In-

crease for the year, 8494 churches, 4867 members.

Churches, Detroit.—THE DETROIT JOURNAL attempted to secure permission from every church in Detroit to publish a description of the same, and the portrait, with a biographical sketch, of its pastor; but it has been compelled to omit the very few who declined the JOURNAL's request. Where a description is given without the portrait, it is because the pastor would not consent to supply his photograph. This year the Detroit churches only are represented; next year an attempt may be made to represent the State at large.

Churches, Presbyterian.—The American Presbyterians have 16 churches of more than 1000 members each. The largest is Dr. Talmage's in Brooklyn, with 4372 at the latest figures; then Dr. Cuyler's in that city, and Dr. Hall's in New York, with 2350 and 2312. New York has 5 of the large churches, Brooklyn 3, Philadelphia, Chicago, and Rochester 2 each, and Minneapolis and Cleveland 1 apiece.

Cities, Growth of American.—Advance bulletins from the Census Bureau exhibit many interesting facts. In the summary of one by The Interior, city population has increased since 1840 from 8.5 per cent to more than one-fourth that of the whole country, there being now 58 cities having populations above 50,000, 28 above 100,000, and 16 above 200,000. Ten years ago only about 22.5 per cent of the population was urban, while there were but 35 cities having populations above 50,000, 20 above 100,000, and 10 above 200,000. In 1880, moreover, only 14.1 per cent of the total population lived in cities of 50,000 or more, while now these cities contain 11,740,118, that is, 18.8 per cent, or nearly one-fifth of the whole population, a number larger than was accredited to all the cities of the country above 8000 ten years ago. There now live in cities above 200,000, 8,029,748 people, a number but 42,000 less than contained in all the cities above 8000 in 1870, and the cities above 400,000 now house more people than lived in all the towns and cities above 8000 in 1860. The population gathered in cities above 8000 in 1840, estimated at 8.5 per cent of the total population, was only half as large as that now congregated in cities of 1,000,000 inhabitants or more, while in 1790 the urban population was but 3.3 per cent of the whole. Of cities

having a population above 1,000,000 there are three, New York with 1,513,501 inhabitants, Chicago with 1,098,576, and Philadelphia with 1,044,894, with a percentage of increase during the decade of 25.4, 118.3, and 23.3 respectively. Chicago shows the largest percentage of increase, as well as the largest aggregate increase, having more than doubled its population since 1880, that is to say, having added to itself two cities each somewhat larger than that of Buffalo. Its proportionate increase has, however, been exceeded by a number of smaller cities, Omaha, for example, having more than quadrupled its population, Minneapolis and Denver having tripled, and Kansas City more than doubled during the decade. A remarkable growth is also noted in Lincoln, Neb., which now has 55,491 inhabitants, an increase of 326 per cent; and there are several other cities of the same class showing a like wonderful expansion. Nearly all the larger gains are in western cities or cities on the lakes, a fact which goes to show that the trend of immigration and commerce is still, sectionally speaking, east and west rather than north and south. The cities making the greatest increase are on the great interior waterway of the lakes or at the junction of great trunk lines of railways, Chicago being a fair sample of the first-class and the heavy gain of St. Louis doubtless being due rather to its position as a railway center than to its facilities for water shipments. The latter theory is borne out by the fact that New Orleans and Cincinnati, with their access to rivers, gain only eleven and sixteen per cent respectively, while Toledo and Cleveland, with both lake and rail facilities, gain over sixty per cent. The cities forming the first markets for the agricultural products of the West, and those located on the leading transportation routes to the seaboard, show the largest increase of population, and will doubtless continue to do so.

Cities, Popular Names of.—Page 78 of our Year-book for 1889 comprises a number of American city nicknames. Some additional soubriquets for cities named there are the following: Boston, the Puritan City; Cincinnati, the Paris of America; Indianapolis, City of Concentric Circles; Lowell, the Manchester of America; New York, Metropolitan City; Philadelphia, City of Homes; Pittsburg, Birmingham of America; Salt Lake City, City of the Saints.

Among cities not mentioned in the list of '89 are these: Akron, O., Summit City; Birmingham, O., Brantown; Dayton, O., Gem City (also Quincy, Ill.); Hannibal, Mo., Bluff City; Kalamazoo, Mich., Celeryville; Lynchburg, Va., Hill City; Paterson, N. J., the Lyons of America; San Francisco, Frisco, Golden City; Salem, Mass., City of Peace; Streator, Ill., City of the Woods; Toledo, O., Corn City; Vincennes, Ind., the Old Post; Xenia, O., Twin City; Zanesville, O., City of Natural Advantages. Foreign cities: Aberdeen, Granite City; Alexandria, Delta City; Athens, City of the Violet Crown; Baalbec, City of the Sun; Brussels and Milan, Little Paris; Cairo, City of Victory; Cork, Drish-en City; Damascus, Eye of the East; Edinburgh, Maiden-town, Northern or Modern Athens, Athens of the North; Gibraltar, Key of the Mediterranean; Havana, Pearl of the Antilles; Jerusalem, Holy City, City of Peace, City of the Great King; Leipsic, Town of Lime-trees; Limerick, City of the Violated Treaty; London, City of Masts, Modern Babylon; Quebec, Gibraltar of America; Rome, Eternal, Nameless, or Seven-hilled City, Queen of Cities, Mistress of the World; Sodom and Gomorrah, Cities of the Plain; Venice, Queen City of the World, Bride of the Sea; Winnipeg, Gate City of the Northwest.

Clinton-ave. Baptist Church, Detroit, organized Nov. 30, 1880, with 52 members. Its sanctuary, dedicated 1885, is situated on Joseph Campau and Clinton aves., $1\frac{1}{2}$ miles east of the City Hall, and cost about \$26,000. It seats about 600; membership, 295. Sunday services 10:30 and 7:30; visitors welcome to all. Rev. C. C. Smith, pastor, born E. Va., Sept. 29, 1842, entered the ministry May, 1875, and assumed his present pastorate in May, 1890. Residence, 698 Croghan; calls any secular day from 9 to 2.



REV. C. C. SMITH.

Coal.—Officers of the Government Geological Survey figure that the area

in Colorado where coal has already been developed covers at least 1,000,000 acres, and estimate the entire coal-bearing tract of the State at more than 26,000,000 acres, a surface as large as England.

Coat.—The history of the little M-shaped nick upon the lapel of coats is given as follows: When the first Napoleon gave way to his ambition, he tried to implicate General Moreau in Pichegru's conspiracy. Moreau had been Napoleon's superior and was very popular, but under the circumstances, as Napoleon was on top, it was not safe publicly to express any sympathy with Moreau; so his admirers secretly agreed to nick their coat-lapels to show who they were. Carefully note the first coat-front you see that is well-fitted and buttoned, and see if you can not plainly detect the letter M in its windings. The M will appear upside-down, the little nicks forming its sides. M is the initial letter of Moreau, and his champions were known by the nicks in the lapels of their coats.

Coins.—A good way to send them through the mails is to cut a piece of thick pasteboard to fit evenly in an envelope, make a slot or depression in it just the size of the coin to be sent, insert the coin, and put a wafer or paste a bit of thin paper over it.

College Graduates.—Contrary to the popular impression, a large share of successful men in public life have been college graduates. In this country it was shown just before the present Administration and Congress came in, that 83 per cent of the Chief Justices of the Supreme Court were graduates; Associate Justices, 73; Speakers of the House, 61; Presidents, 54.5 (now 56.5, or 13 out of 23); Vice-Presidents, 50; U. S. Senators, 46; members of the House, 32. In the last Congress 32 of the 76 Senators, or 42 per cent, were graduates; also one-third of the Representatives. Five in eight of the present Cabinet are graduates—Secretaries Blaine, Tracy, Proctor, and Miller, and Atty.-Gen. Noble.

Colors, New.—Eiffel red, a deep brick-red, having a dash of terra cotta; buffalo, a rich medium-red; Virgil, a bright shade; rosewood, a purplish red; ten, a flaming shade; imperial, a deep tint; Titian, a yellow-red. Red was the most prominent color of the season, green, lilac, brown, gray, and blue following. Cythere is a pale green, reseda

a grayish green, tilleul a light-yellow green, lizard a bluish tint, linden a pale gray shade, verdetta a dark leaf-green, ecorce a grayish-green, also Rhone and sage, serpente a blue gray-green, if such a combination can be imagined. Vieux rose remains a famed pink, while rose fane is of the same style though brighter. Orchid is a pinkish mauve, veal a reddish pink, and Camilla a very deep shade. Mikel is a bluish gray, silver and steel clear shades; boa and serpent greenish grays. Afrique is a red brown, chestnut and Vandyke golden browns, Chataigne a dark oak shade, Kaironan a yellow brown, citron a bright yellow or rouge, a red gold, pearl grayish white, opal milk white, silver-white a pale gray-white, violette purplish lavender, iris blue plum, burned brandy brown lilac, lilac a pale plum, having a tint of pink; Saxe a deep blue. Ciladon a greenish shade, Russian a dark tint, gris bleu a steely blue, granite a gray blue, Quaker a clear shade, Neptune a dark grayish tint.

Columbian World's Fair.—The great Exposition of 1893, celebrating the 400th year after the discovery of America by Columbus, will be held at Jackson Park, Chicago. This city carried off the prize in a sharp contest in the House of Representatives at the last session of Congress, the contestants being Chicago, New York, Washington, and St. Louis. All the world will be invited to send exhibits, and the Fair is expected to be larger and finer than any as yet held, not excepting the magnificent Paris Exposition of 1889. Commissioners have been appointed from all the States, headed by Hon. Thomas W. Palmer of Michigan, President of the Commission; and an auxiliary board of ladies has also been chosen, of which Mrs. Bagley, of Detroit, widow of the ex-Governor, is a member. Congress has made liberal appropriations; Chicago has raised its guarantee fund to \$10,500,000; and all arrangements are progressing most hopefully.

Congress.—The number of members of Congress from the adoption of the Constitution to the present time has been: First and Second Congresses, '89-'93, 26 Senators, 65 Representatives; Third to Seventh, 1798-1803, 30 and 105; Eighth to Twelfth, 1803-13, 32 and 141; Thirteenth to Seventeenth, 1813-23, 34 and 181; Eighteenth to Twenty-second, 1823-33, 48 and 213; Twenty-

third to Twenty-seventh, 1833-43, 48 and 240; Twenty-eighth to Thirty-second, 1843-53, 52 and 223; Thirty-third to Thirty-seventh, 1853-63, 66 and 237; Thirty-eighth to Forty-second, 1863-73, 76 and 293; Forty-third to Forty-seventh, 1873-83, 76 and 293; Forty-eighth to Fiftieth, 1883-89, 76 and 325. North and South Dakota, Montana, and Washington added 8 Senators and 5 Representatives; and Wyoming and Idaho will add 4 and 2, or 88 and 332 in all. The rate of apportionment or representation in the House was 30,000 of population to March 4, 1793; 33,000 to March 4, 1813; 35,000 to March 4, 1823; then, at regular intervals of ten years, 40,000, 47,700, 70,680, 93,423, 127,381, 131,425, and 151,912, at which it remains till March 4, 1893, when there will be a new apportionment under the Eleventh Census. Under the figures of 1843 and since, Michigan had 3 Representatives to '53, 4 to '63, 6 to '73, 9 to '83, and 11 since. The number of ex-Union and Confederate soldiers in the present (Fifty-first) Congress is, in the Senate, 15 U. and 22 C.; in the House, 85 U., 59 C.; in both, 100 U., 81 C.; total, 181.

Corn-palaces.—The corn-palaces of Sioux City, Io., have been famous among the agricultural and industrial exhibits of late years. The first was built in 1887, and cost \$30,000; the second (1888) cost \$60,000; and the third (1889) was 240 by 120 feet, with central tower 200 feet high. The buildings are entirely covered by stalks, husks, and ears of corn, white, yellow, purple, and red, in various artistic and showy designs. They have been very extensively visited.

Copyright.—Apply for copyright *before publication*, to the Librarian of Congress, Washington, D. C. Send a type-written or printed title-page (or if not book, the title) and for recording and a copy to the applicant. Place upon title-page or the next page of book or pamphlet, or somewhere on map or other production, words and figures similar to these: "Copyrighted, 1891, by J. Smith." Careful observance of this form, or the old longer one, is necessary. Use of these words before copyright subjects the offender to a fine of \$100. When the publication is out, send two copies of best edition to the Librarian of Congress. Copyright runs for 28 years, and may be renewed for 14 years.

Corporal Punishment.—It is said, but we think rather doubtfully, that only five of our States are left in which a teacher may legally inflict bodily punishment upon a pupil. Michigan is one of them, however, although such punishment is not expressly provided for in the law.

Cotton.—The total cotton crop of the United States for 1890 amounted to 7,311,322 bales, exceeding the largest crop ever before grown by 265,489 bales, and the crop of 1889 by 373,032. Of this 546,363 were consumed in the South, against 481,235 in 1889. There are 270 cotton mills in operation in the country, of which 33 are in the South.

Crosses on Flags.—The original cross of St. George, on the English flag, was red on a white field; St. Andrew's, Scotch, white on blue; and St. Patrick's, Irish, red on white. The English and Scottish crosses were united on the flag by James I. St. Andrew's and St. Patrick's were combined in 1801, and are now represented on the "Union Jack" by the broad white band of the saltire, or diagonal cross, upon the blue field, for the former, and the red band with narrow white edge for the latter. The cross of St. George upon the Jack is still red, but also with a narrow white edge representing the original field.

Cubic Foot.—Weights: Cork, 15 lbs.; tallow, 59; loose earth or sand, 95; common soil, 124; strong soil, 127; brick, 125; clay, 135; clay and stones, 160.

Date-Figuring.—An interesting method of finding the day of the week, when the rest of a date is given, was contained in the Journal Year-book for 1889. A similar way is this: Take the last two figures of the year, add a quarter of this, disregarding the fraction, if any; add the date of the month, and then the figure in the following list, one figure standing for each month, 3-6-6-2-4-0-2-5-1-3-6-1. Divide the sum by 7; the remainder will give the number of the day in the week; if no remainder, the day is Saturday. For example, take July 4, 1890,—90, 22, 4, and 2, equal 118. Divided by 7, the quotient is 16 and remainder 6, which indicates Friday, the actual day of the Fourth.

Days, Longest.—At New York, about 15 hours; Montreal, 16; London and Bremen, 16½; Hamburg and Dantzic, 17; Stockholm, 13½; St. Petersburg and Tobolsk (Siberia), 19; Tornea, in Fin.

land, nearly 22 (Christmas, less than 3); Wardbury, Norway, 2 months and 1 day; Spitzbergen, 3½ months; the North Pole, 6 months, with 6 months night.

Death-roll of 1890.—See Appendix.

Debts, Public.—The public debt of Paris amounts to 790 francs for every man, woman, and child of its population; Frankfort, 317 francs per head; Milan, 218; Berlin, 154; The Hague, 136; Brussels, the most heavily indebted of all European cities, 1605. France pays annually in interest upon her public debt, \$258,000,000; Great Britain, \$130,800,000; Austro-Hungary, \$126,000,000; Italy, \$100,000,000; Russia, \$220,000,000; and Spain, \$56,000,000. Prussia alone of the German states pays \$44,000,000. The United States are now paying but \$35,000,000. Canada, with but one-twelfth of the population, pays nearly one-third as much annually in interest, or \$10,000,000.

Detroit.—The year 1700, before Detroit was settled, Robert Livingston wrote to Lord Bellomont, submitting a proposal to build an English fort here, that the site was "called by the French DeTroett, the most pleasant and plentiful inland place in America by all relation, where there is arable land for thousands of people."

By the census of 1890 Detroit has 205,699 population, an increase of 89,329, or 77.94 per cent, since 1880. It is believed, however, to have a population of not less than 225,000. Taking either figures, it is fifteenth of American cities in order of population, advanced from eighteenth in 1880. It is about 6½ miles long by 3½ broad, and has a river front of 7 miles; covers 23 square miles in area, or 14,720 acres; has 65 miles of street railway, with 95 miles of track, 12 miles of boulevard, and 140 miles of paved streets, 5 with stone and with asphalt, besides 5 contracted. Its net public debt is \$1,634,500; assessed valuation, real \$123,391,610, personal \$38,436,960, total \$161,828,570; rate of taxation, \$1.57 per \$100 valuation. Valuation of the city, as equalized at the last meeting of the Board of Supervisors, and taxation (except city) for the next year: First ward, \$28,058,187, \$65,019.70; second, \$39,125,217, \$90,665.43; third, \$5,865,419, \$13,591.88; fourth, \$11,691,690, \$27,093.26; fifth, \$6,601,563, \$15,297.80; sixth, \$6,504,824, \$15,073.67; seventh, \$5,429,123, \$12,581.02;

eighth, \$5,547,041, \$12,854.15; ninth, \$5,763,981, \$13,356.88; tenth, \$5,461,386, \$12,655.58; eleventh, \$4,141,167, \$9,596.60; twelfth, \$4,782,099, \$11,081.75; thirteenth, \$3,959,863, \$9,176.10; fourteenth, \$4,554,167, \$10,553.09; fifteenth, \$3,706,215, \$8,588.30; sixteenth, \$2,801,546, \$6,492.04. Totals, \$143,993,448, \$333,677.25.

Of the official boards of the city, the Boards of Education and of Estimates are elected by the people from the wards, severally; the Metropolitan Police Commissioners are appointed by the Governor of the State; and the Public Library Commissioners are appointed by the Board of Education. All other Boards of Public Works, Fire, Water, Park and Boulevard, Poor, Building Inspectors, and Inspectors of the House of Correction, are appointed by the Mayor and confirmed by the City Council.

The principal public services of the city are the Police, Fire, and Water Departments, and the Public Library. A "Municipal Improvement Association" has lately been formed, to secure if possible ownership of the public lights, street-car lines, etc., by the city government. The Police Department consists mainly of 28 roundsmen at \$900 a year (2 serving as detectives receive \$1000 each), 310 patrolmen at \$800 (6 acting as detectives and one as harbor-master have \$1000), 1 as city sealer \$960, and 6 precinct officers (\$900), 14 doormen at \$700, 3 signal time-keepers at \$600 and \$360, 1 assistant clerk, 2 hostlers at \$600, 1 janitor at \$540, and 1 harbor-master's boy at \$360. The Fire Department has a paid force of 261 men, in charge of 15 steam and chemical fire-engines, 6 hook-and-ladder trucks, and 4 supply wagons. Several engines, hose-carts, etc., and 1 fire-escape, are kept in reserve. The fire-alarm telegraph has 346 miles of wire and 226 alarm-boxes; street-hydrants number 1828, and reservoirs 420. The Public Library includes about 100,000 bound volumes and 12,000 pamphlets; is open 8 A. M. to 9 P. M., except Sundays and holidays, and is free to all residents of Detroit above 14 years old; the reading-room, with 31 dailies and 213 weeklies and magazines, is free to strangers as well as citizens, and is open every day in the year, on Sundays and holidays from 2 to 9 P. M. The Scientific Museum attached is open every secular afternoon from 2 to 5.

The water service of the city had Nov. 1, 1890, a total pipeage of 367 miles. Two large mains from the pumping-works, each of 42 inches diameter and an economic capacity of 20,000,000 gallons daily, supply the city. Over 51,000,000 gallons have been forced through them on occasions. The works are on the Detroit river, four miles from the City Hall, and contain three engines with an aggregate daily capacity of about 78,000,000 gallons, and eight boilers. The average number of gallons supplied daily to Nov. 1, 1890, was 34,037,621, which is 1,187,257 less than the general average of 1889, and 5,310,095 less than that of 1888. The valuation of the works Jan. 1, 1890, was \$3,410,910, on a careful inventory at present valuations, not estimated as formerly. To this about \$300,000 has been added the present year.

The principal points of interest in and about Detroit are as follow:

Historic: Sites—Fort Pontchartrain, Cadillac's foundation of Detroit, below Jefferson av., near Michigan Exchange, about the corner of Woodbridge and Wayne. "Pontiac Gate," at First National Bank Jefferson and Griswold. Fort Shelby, Fort st. west and Shelby. Fort Croghan or "Nonsense," Park and High. Campau house, 140 Jefferson av. Cadillac or old Cass house, 146 Larned. Hamtramck house, corner Wesson place, East Detroit, is a well-kept example of the old French dwelling, which Col. Hamtramck owned and in which he died, April 11, 1803. Bloody Run and remnant of Pontiac tree, Jefferson av. High School building, formerly Territorial and then State Capitol, Griswold and State. Grant house, formerly occupied by Gen. (then Lieut.) U. S. Grant, 253 Fort st. east.

Monumental: Cannon from Perry's victory, Woodward av., front of City Hall. Soldiers' and Sailors' Monument, Campus Martius. Bagley Fountain and Bust, Campus Martius. Cadillac, Marquette, Lasalle, and Richard statues, on the City Hall. Elmwood Cemetery, east end (Chandler and other monuments); Mt. Elliott, adjoining (Catholic, Hamtramck buried here); Jewish, also near; Woodmere, west end (also crematorium).

Public Buildings, Works, and Parks: Belle Isle Park and Bridge, head of Detroit river. Grand Circus, four squares above Campus Martius. Cass Park, Second av., between Ledyard and Bagg. Boulevards, north and east sides. Water-works, East Detroit. Police headquarters, Randolph st. Fire headquarters, Larned and Wayne (self-propeller at engine-house head of Griswold). Post-office, custom house, and U. S. court, Griswold and Larned. Beginnings of new Government Building, Fort st. west, Lafayette av., Shelby, and Wayne. County Jail, Clinton and Beaubien. City Hall and Tower, Campus Martius. Market buildings, Cadillac Square.

Libraries, Books, and Art: Public Library and Scientific Museum, Gratiot, near Woodward; museum open 2 to 5 P. M. Bar Library, Seitz Block, near Post-office. Art Museum, Jefferson and Hastings. Cyclorama (battle scenes), Bates and Larned. Art stores, Woodward above Campus and Grand Circus.

Book-stores, Woodward, Larned to John R. Second-hand book-stores, Grand River, near Woodward, and 35 Michigan av. Calvert lithographing establishment, Larned and Shelby.

Theatres: Detroit Opera-house, Campus Martius. Whitney's Opera-house, Griswold, above Michigan av. The Lyceum, Randolph, nr. Monroe. Wonderland (dime museum), 78 Woodward.

Commercial: Board of Trade and building, also U. S. Signal Service, Jefferson and Griswold. Hammond Building (ten stories), Griswold and Fort st. west. Union Grain Elevator (1,300,000 bushels capacity), Union Depot, Twelfth st. Cleveland steamers, foot of Griswold or Shelby. Ferries, foot of Woodward or Joseph Campau. Railway ferries, Central, Milwaukee, and Union depots. Central depot, foot of Third st.

Factories, etc.: Michigan Stove Works, Jefferson and Adair. Peninsular Stove Works, Fort W., 8th to 10th. Detroit Stove Works, 1320-60 Jefferson. Michigan Car-works, West Detroit. Peninsular Car-works, Riopelle and D., G. H. & M. R. R. Pullman Palace-car Works, Croghan and St. Aubin av. Bridge and Iron Works, Foundry St. and M. C. R. R. Brush Electric-light Works, Foundry St. and M. C. R. R. Edison Electric-light Works, State and Washington. Detroit Electrical Works, Woodbridge and Seventh. Ferry Seed Store, near Lyceum Theatre. Seed farm and garden, Grand River av., near city. Test gardens, Ferry av., near Woodward.

Miscellaneous: Y. M. C. A. Building, Grand River and Griswold. THE DETROIT JOURNAL office, 40 Congress W. Western Union Telegraph, Griswold and Congress W. Telephone central office, 68 Griswold. Recreation Park, Brady, between Beaubien and Brush. Athletic Club grounds, 833-65 Woodward. Detroit Skating Rink, Larned and Randolph; the Princess, Second, near Grand River. Michigan (Republican) Club-house, 92 Fort W. Light Infantry Armory, Congress east, near Woodward. Light Guard Armory, formerly Fireman's Hall, Jefferson and Randolph. Boat-houses, foot of Joseph Campau.

Suburban: Canadian suburbs, particularly Windsor and Sandwich. Inquire for Gen. Hull's headquarters in the war of 1812, etc. Fort Wayne, west end. Glass-works, Delray, below city. Grosse Pointe, above city. Electric railways, east and west ends, and north end Woodward av.

The charities of the city are as follow:

Association of Charities, 35 Congress street. East

Contagious Disease Hospital, Woodward Road, near city limits.

Day Nursery and Kindergarten, 55 Church. Detroit Sanitarium, 250 Fort st. west.

Emergency Hospital and Free Dispensary, Michigan av. and Second.

Free Eye and Ear Clinic, Room 8, Market Building.

Grace Hospital (homoeopathic) Willis av. and John R.

Harper Hospital, head of Martin Place, near Woodward.

Home for Boys, High st., near Grand River.

Home of the Friendless, Warren av., near Woodward.

Home of Industry and Refuge for Discharged Prisoners, 641 Beaubien.

Home for the Aged Poor, Dequindre and Scott.

House of the Good Shepherd, 792 Fort st. west.

House of Providence, Infant Asylum, and

Lying-in Hospital, St. Antoine and Elizabeth. Industrial School, Grand River and Washington.

Lutheran Deaf and Dumb Asylum, Norris, near city.

Open Door (for fallen women), 223 Park.

Protestant Orphan Asylum, 988 Jefferson.

Seamen's Home, Griswold and Atwater.

St. Anthony's Male Orphan Asylum, Gratiot av., near city.

St. Luke's Hospital, Church Home, and Orphanage, McKinstry av. and Fort st. west.

St. Vincent's Female Orphan Asylum, McDougall av., near Larned.

St. Joseph's Retreat for the Insane, near Dearborn.

St. Mary's Free Eye and Ear Infirmary, Clinton, near St. Antoine.

St. Mary's Hospital, St. Antoine, near Gratiot.

Thompson Home for Old Ladies, Hancock and Cass.

United States Marine Hospital, Jefferson and Mt. Elliott.

Woman's Hospital and Foundlings' Home, Thirteenth, below Grand River.

Working Woman's Home, Clifford and Adams.

Zoar Orphan Asylum and Home for the Aged, 248-56 Harvey av., Springwells.

The railways running into Detroit, or reaching it by ferry steamers, are the Grand Trunk, the Canadian Pacific, the Michigan Central (including the Canada Southern), Lake Shore, Wabash Western, Detroit & Bay City; Detroit, Grand Haven, & Milwaukee; Detroit, Lansing & Northern, and the Flint & Pere Marquette. For fuller account of such of these as are Michigan roads, with lists of principal officers, see "Michigan."

[For city government, election statistics, etc., see Appendix.]

Diamonds.—The value of all the diamonds in the world has recently been estimated at \$1,000,000,000. About 8,000 dealers trade in them, carrying a total stock of about \$350,000,000. Diamond cutters and polishers number about 4500, chiefly in Amsterdam, Antwerp, and Paris. The finest diamond known is believed to be the Regent, owned by the French Government. It is very near a perfect brilliant, about 1 3-8 inches across, weighs 136 1/2 carats, and is held by experts at 12,000,000 francs, or nearly \$2,400,000.

Dickinson, Charles M.—This is the man, not Charles Dickens, who wrote the pretty poem entitled "The Children," and giving the reflections of a school-teacher. He was a teacher in Eastern New York, and then editor of the Republican in Binghamton, N. Y., where he now lives.

Discoveries by Accident.—Among a number of interesting discoveries made by happy chance is chloroform, which

has proved such an inestimable boon to thousands of sufferers. Dr. Simpson, who was afterwards knighted, set himself to find some anæsthetic to take the place of ether, which had gained a bad name owing to the fact that several deaths had occurred through the careless use of it. Other scientists joined him in his researches, and carefully analyzed every substance which they thought was in the least likely to give the desired result. One night the party were busily engaged in their self-imposed task. They had tested every substance which had been selected for experiment without anything approaching to a favorable issue, and were beginning to feel disheartened by their lack of success. As one of them was poking about the laboratory to see if he could find anything else which might be put into the testing-glass with which each was provided, he happened upon a small bottle of a dark substance which was looked upon more as a curiosity than as possessing any useful properties. With scarcely a thought of success he poured a little of it into each of the tubes, and the members of the party began to inhale it. For a few moments they seemed seized with an unusual gladness, but soon they one after another fell to the ground, overcome by the powerful fumes. As they gradually came to again they recognized that their search was over, and from that occasion dates the use of chloroform as an anæsthetic.

The rollers which are used to spread the ink with which newspapers and books are printed are the outcome of an accident. In days gone by pelt-balls were used for this purpose. A Shropshire printer was unable to lay his hands upon the pelt-ball with which he wanted to ink the type. He was pressed for time, and caught up the first thing that seemed to him capable of serving the purpose of the missing pelt-ball. This happened to be a piece of glue which had fallen from the glue-pot, and which did the work so effectively that he mentioned his improvisation to his fellow-workmen. Experiments followed, and it was soon discovered that glue, mixed with molasses so give it the requisite consistency, was the best possible article for this purpose.

Disinfection.—Method of Dr. Kellogg, of the Battle Creek Sanitarium: The best means to disinfect a room which has been occupied by a con-

sumptive or person suffering from any other infectious disease, is to burn sulphur in it. Take a dishpan, place a flat plate in the bottom of it, and on this set a kettle containing the proper quantity of sulphur mixture, equal quantities of sulphur and charcoal. Ascertain the size of the room, and burn three pounds of sulphur for every thousand cubic feet of air. Fill the pan with water so that it will come halfway up on the kettle, then turn alcohol or benzine on the mixture, ignite, and get out of the room as speedily as possible. Alcohol is much the best to use; two or three ounces will be sufficient for several pounds of sulphur. Let the room remain closed for about twenty-four hours, and it should be left open to air for another day, and then thoroughly cleansed, the furniture with disinfecting solution, the walls newly kalsomined or papered, and the wood-work covered with fresh paint. It should be prepared previously by having every crack about doors or windows tightly pasted or stopped up. For disinfecting clothing from the bed and the patient, soak it for four hours in either a solution of corrosive sublimate and water, or the same time in a two-per cent solution of carbolic acid. The latter is preferred for general purposes; it will not affect the textures, while corrosive sublimate will shrink flannel clothing and make it harsh. If the disease be diphtheria, scarlet fever, or the like, every article of clothing or upholstery which will not wash must be burned, with every book and paper that has been in the room.

Diseases, Contagious or Eruptive.—The following table is helpful:

DISEASE.	SYMPTOMS USUALLY APPEAR ON	ANXIOUS PERIOD RANGES
Chicken Pox.....	14th day.	10 to 18 days.
Diphtheria.....	2d "	2 " 5 "
Measles.....	14th "	10 " 14 "
Mumps.....	19th "	16 " 24 "
Whooping Cough.....	4th "	12 " 20 "
Scarlet Fever.....	4th "	1 " 7 "
Small Pox.....	12th "	1 " 14 "
Typhoid Fever.....	21st "	1 " 28 "
Whooping Cough.....	14th "	7 " 14 "

Divorces.—Of the 328,716 granted in this country 1867-87, 65 per cent were to wives, 126,676 for desertion, and 25,371 after 21 years of marriage. Among reasons assigned by husbands were that one had been beaten by his wife's bustle, another's wife had pulled him out of

bed by his whiskers, another was charged by his wife with being "no man at all," another had but one button on his vest and his wife would not let him go to fires at night, and in one case a bride fell in love with a German on the wedding-trip and sat in his arms on the train kissing him. One of the wives seeking divorce alleged that her husband had cut off her bangs, another that he refused to cut his toe-nails, another that on his return from hunting he had made her charge upon him like a dog, and still another that her husband would not wash himself, "thus causing her great mental anguish," and finally one who convicted her spouse of coming home late at night and persisting in talking to her—"mental cruelty," she called it.

Dollar.—The American standard dollar is made of 371½ grains of pure silver and 41½ grains of alloy, or 412½ grains in all. The gold dollar weighs 25.8 grains, of which 23.22 are pure gold. To find the intrinsic or real value of the standard dollar at any time, ascertain the London price of silver bullion per ounce, and multiply the number of pence in it by 1.69, which will give the value in cents very nearly. A gold dollar was minted as an experiment in 1873, of which 135 specimens are known. It is composed of one part gold, 16.1 parts silver, and 1.9 copper; is about the size of a silver half-dollar, but thinner and lighter, and of bronze color; and at the time had an intrinsic value of exactly 100 cents.

(Dutch) Reformed Church, Detroit, is on Catherine st., near St. Aubin. It was organized in 1873 but had only nominal ex-

istence much of the time until the close of 1888, when the pastorate of the present incumbent began. The church has now 70 communicants and 75 Sunday-school pupils, together representing 40 families. The building was erected in 1874, seats 200, and is valued with lot at \$4000. Services



REV. DIRK BROEK

and is valued with lot at \$4000. Services

on Sunday at 9:30 and 3; Sunday-school at 11; catechetical classes 7:30 Friday and 2 on Saturday. Rev. Dirk Broek, pastor, born Nieuw Leuzen, Overijssel, Netherlands, Feb. 5, 1835, came to America in 1847 with his parents, among the first of the Holland colony in Western Michigan; studied at Holland Academy, now Hope College, Rutgers College, and New Brunswick Theological Seminary, was ordained in 1865, and has since ministered to churches at Graafschap, Saugatuck, Coopersville, and Holland, Mich., Cleveland, O., and Detroit Residence, 234 Sherman st.; receives calls 10 to 12 Tuesdays and Thursdays.

Drunken Man, how to Arouse.—An experienced police officer says the most effective way is to pinch him under the arms, which has been known to succeed when all other efforts have failed.

Earth, Rotundity of the.—A new and striking proof of this has been discovered at the University of Palermo, near the Mediterranean Sea. Many photographs taken of the sun reflected from the water-surface a few minutes after rising or before setting, show a smaller diameter in the plane of reflection of the reflected image than of the direct. This is due to the convexity of the surface, forming a cylindrical mirror, and the amount of flattening observed is said to accord well with the measure demanded by the earth's rotundity and the theory of the case.

Easter Sunday.—There is an astonishing variety in the dates upon which this day occurs. Between 1803 and 1886 inclusive every day in April was taken for it, save the last five, and eight days in March, 22d to 31st, except the 24th and 29th. March 23 is the earliest and April 25 the latest date, covering 35 days. It came five times each April 16 and 19; four times March 31 and April 1, 2, 11, and 12; and three times March 27 and 28, and April 4, 5, 6, 7, 8, 10, 13, 14, and 22. It falls upon the following dates during the next ten years: 1891, March 29; 1892, April 17; 1893, April 2; 1894, March 25; 1895, April 14; 1896, April 5; 1897, April 18; 1898, April 10; 1899, April 2; 1900, April 15.

Echoes, Remarkable.—One in Fairfax county, Va., repeating flute notes distinctly, but often pitched higher by a third, a fifth, or an octave, according to states of the air. Alpine echoes of the shepherd's horn die away in succes-

sive reflections, each softer and more flute-like than the next preceding. Near Coblenz, Prussia, an echo repeats 17 times at unequal intervals, sounding low, soft, right, left, in unison, or different by a third, fifth, or tenth. The Lake Killarney echo follows with a capital second any simple tune on the bugle. One near Glasgow repeats thrice a few notes of a trumpet, first a third lower, each following time lower still. Another between the wings of a castle near Milan repeats a pistol-shot 60 times. The famous echo at the tomb of Metella, near Rome, repeating an hexameter line requiring 2 1-2 seconds to speak it, is thus found to originate 1500 feet from the speaker.

Eggs.—According to naturalists, a scorpion will produce 65 young; a common fly will lay 144 eggs, a leech 150, and a spider 170. An hydrachna produces 600 eggs, a frog 1100, a female moth 1100, and a tortoise 1000. A gall insect has laid 50,000 eggs, a shrimp 6000, and 10,000 have been found in the ovary of an ascaris. One naturalist found over 12,000 eggs in a lobster, and another over 21,000. An insect very similar to an ant has produced 80,000 eggs in a single day, and Leuwenhoeck seems to compute 4,000,000 for the crab. Many fishes produce an incredible number. More than 36,000 have been counted in a herring, 38,000 in a smelt, 1,000,000 in a sole, 1,130,000 in a roach, 3,000,000 in a sturgeon, 342,000 in a carp, 353,000 in a tench, 546,000 in a mackerel, 992,000 in a perch, and 1,357,000 in a flounder. But of all fishes the cod seems to be most prolific. One naturalist computes that it produces more than 3,686,000 eggs, and another as many as 9,444,000. A rough calculation has shown that, were 1 per cent of the eggs of the salmon to result in full-grown fish, and were they and their progeny to continue to increase in the same ratio, they would in about six years amount in bulk to many times the size of the earth. Nor is the salmon the most prolific. In a yellow perch weighing 3½ ounces have been counted 9943 eggs, and 25,141 in a smelt ten inches and a half in length. An interesting experiment was made in Sweden in 1761, obtaining from 50 female breams 3,100,000 young, from 100 female perch 3,215,000, and from 100 female mullets 4,000,000.

Eighteenth-st. Baptist Church, Detroit, was a mission of the Lafayette-

ave. (now Woodward-ave.) ch., organized July, 1880, Rev. Frank B. Cressey, first pastor. Its house is a frame building at 18th and Porter sts., seats 550, and is valued at \$7000. Membership, 323. Sunday services—morning prayers at 10, preaching



REV. W. H. STIFLER.

10:30 and 7:30, Sunday-school at 12 and 3; young people's meeting Tuesday evening, prayer-meeting Wednesday evening, teachers' meeting Friday evening. A monthly church paper is issued.

Rev. W. H. Stifler, D. D., pastor, born near Hollidaysburg, Pa., March 25, 1841, grad. from Shurtleff Coll. and Theol. Sem. 1869. was ordained pastor at Pana, Ill., June 13, '69, was subsequently pastor at Davenport, Io., and elsewhere, and his present work began Oct. 9, 1887. Residence, 234 Twentieth St.; "at home" Thursdays, 4 to 8 p. m.

Electricity.—Some definition of electric units was made in the Year-book for 1890. It has since been proposed similarly to perpetuate the memory of American electricians, as Franklin and Henry, by attaching their names to other units yet unnamed; and it is thought that at the meeting of the American Meteorological Society this year one of these honored names will be given to the unit of induction. The most powerful electric light in the world is believed to be that of the Housholm lighthouse on the Jutland coast, North of Europe, with 2,000,000-candle power, and visible 40 miles. The two largest dynamos are in London, each with an engine of 5000 horse-power and a similar one in reserve, making a possible total for each of 10,000 horse-power, or 200,000 lights. An Englishman named Webster has successfully applied electricity to the purification of sewage-water, and a New Jersey inventor thinks the dynamo may be successfully used in war to make artificial lighting, claiming himself to produce an effective flash against a body of men a mile distant.

Elements.—Seventy-two elements are now recognized in the material constitution of the world, all but 17 of which are metallic. A number of claimants to recognition are not yet sufficiently known to be admitted. Discovery is reported of a new element found in an extinct crater in Damaraland, and hence called damaria. It is said to have an atomic weight of but 0.5, or half that of hydrogen, and so is the lightest known substance, if its existence is established.

England, Kings and Queens of.—The following useful old rhymes, giving the succession of English sovereigns, may be new to some of the younger generation:

First William the Norman, then William his son;
Henry, Stephen, and Henry; then Richard and John;
Next Henry the Third, Edwards one, two, and three;
And again, after Richard, three Henrys we see.
Two Edwards, th'rd Richard, if rightly I guess;
Two Henrys, sixth Edward, Queen Mary, Queen Bess;
Then Jamie the Scotchman, then Charles whom they slew,
Yet received, after Cromwell, another Charles too.
Next Jamie the Second ascended the throne,
And good William and Mary together came on;
Then Anne, Georges four, and fourth William all past,
God gave us Victoria,—may she long be the last!

A later and better jingle tells how the sovereigns died:

William the First got a bruise from his horse,
A random-shot arrow made Rufus a corse;
Henry the Clever on fish too well fed,
Stephen of Blois died quiet in bed;
Henry the Second of grief broke his heart;
Cœur de Lion got killed by a dart,
John by the fever—and nobody sighed;
Henry of Winchester naturally died;
Edward the First died marching to fight,
Edward the Second was murdered at night;
The warrior Edward passed calmly away;
Richard, deposed, was starved out of the way;
Henry the Fourth died of fits to excess,
Henry the Fifth in the noon of success;
Henry the Sixth died of grief in the Tower,
'T was lust brought Edward the Fourth his last hour;
Edward the Fifth, in the Tower too, was killed
By Richard the Third, slain at Bosworth Field;
Henry the Seventh owed death to the gout.
Disorders untold put his namesake to rout;
Edward the Sixth died a natural death,
Mary in quietness exhaled her last breath;
Queen Bess closed in anguish an ill-spent reign,
Scotch James the First passed away without pain;
The First King Charles died under the knife,
Charles his son passed off without strife;
His second son James died exiled from his throne,

William the Third broke his right collar-bone; Queen Anne very suddenly went to her doom, Apoplectical fits sent King George to the tomb;

King George the Second turned out in a rage, His long-reigned successor slipped off in old age;

The Fourth King George and William his brother

With an osseous heart left this life for another; Victoria reigns, so good and wise,

And she'll be greatly missed whenever she dies.

English Investments in the United States of late years have become enormous. In breweries alone one London syndicate by the close of 1889 had placed no less than \$83,380,000 in this country, besides \$6,200,000 in Toronto; and another, having the enormous capital of \$100,000,000, had invested \$40,000,000 here, mostly in breweries. About \$50,000,000 were said to be involved in the purchase of the great Pillsbury and Washburn grist-mills in Minneapolis, with elevators and other properties. Books, celluloid, coal-mines, cotton-mills, dry goods, gas and water and iron works, patent leather, phosphate, proprietary medicines, sugar, and other American industries, have invited or secured large blocks of British capital. The total sum is unknown, but to Jan. 1, 1890, it is believed that large part of \$320,000,000 known to have been handled by the London syndicates had come to the United States.

Epiphany (Reformed Episcopal) Church, Detroit, will presently occupy its new and beautiful Gothic stone building at Trumbull and Myrtle aves., costing with site, organ and chime of 12 bells, stone rectory, and parish house, upwards of \$100,000. The parish was organized about ten years ago, and has doubled



REV. G. W. BROWN.

membership under the present Rector, Rev. G. W. Brown, M. D., who took his pastorate here Dec. 18, 1888. He was born at Westbrook, Me., 64 years ago, was ordained deacon and presbyter 1861, by Bishop Clark, of Providence,

R. I., and has since served important parishes in New England, Pennsylvania, and Chicago. Sunday services 10:30 and 7:30; Wednesday evening, 7:45; Bible-class Friday evening, 7:45. All seats free. Rev. Fred'k Woolfenden, Ass't Minister. Dr. Brown's residence, 591 Grand River ave.; at home Wednesday.

Episcopacy came early to Michigan, Church of England services being held in the British garrison at Detroit, after the occupation in 1765.

Lay reading was afterwards maintained until the War of 1812, and the first missionary of the faith reached Detroit 1824, reporting three communicants in July, increased to nine in



BISHOP DAVIES.

December. The Church is now one of the strongest in Detroit, where it has 23 churches and missions. The State is divided into two dioceses, of Michigan and Western Michigan. The sole Bishop of Michigan was the Rev. Dr. Sam'l McCoskry, consecrated 1836, and remaining in office until after the division of the diocese (1874), resigning in 1878. Bishop Sam'l S. Harris was consecrated the next year, and died in office 1888. The Rt. Rev. Thomas Frederick Davies, D. D., LL. D., third Bishop of Michigan, was born in Fairfield, Conn., Aug. 31, 1831; was graduated from Yale in 1853 and from Berkeley in 1856, ordained by Bishop Williams to the diaconate in 1856 and to the priesthood in 1857; Professor of Hebrew at Berkeley 1856-62, Rector of St. John's, Portsmouth, N. H., 1862-68, and of St. Peter's, Philadelphia, from 1868 until his elevation to the Episcopate. He has served with distinction on many important committees, and on the Board of Missions; was consecrated Bishop of Michigan in St. Peter's Church, Philadelphia, Oct. 18, 1889. The Rt. Rev. George D. Gillespie, S. T. D., first Bishop of Western Michigan, was born in Goshen, N. Y., June 14, 1819; graduated at the General Theological Seminary 1840; ordained Deacon June

28, 1840, by Bishop De Lancey; successively rector of St. Mark's, Leroy, N. Y., St. Paul's, Cincinnati, O., Zion, Palmyra, N. Y., and St. Andrew's, Ann Arbor, Mich., where he remained until his elevation to the Episcopate; received degree of S. T. D. from Hobart College, Geneva, 1875; consecrated first Bishop of Western Michigan in St. Mark's, Grand Rapids, Feb. 24, 1875, by Bishops McCoskry of Michigan, Talbot of Indiana, Bissell of Vermont, Robertson of Missouri, Littlejohn of Long Island, Padodck of Massachusetts, and Welles of Wisconsin. The Bishop has been among the foremost, and one of the most active in prison reform.

Eras, the Famous.—The era of Abraham began Oct. 1, B. C. 2166.

The era of Augustus began in the year of Rome 727, twenty-seven years before the Christian era.

The era of Tyre began B. C. 125, in the year of Rome 628, and in the 186th of the Seleucidæ or Grecian era.

The era of Antioch fixed the creation B. C. 5492. After 285, however, it coincided with the Alexandrian era.

The era of the Hegira dates from the flight of Mohammed from Mecca to Medina, on the 15th or 16th of July, A. D. 622.

The Chinese era begins B. C. 2277, but since the year 163 B. C. Chinese writers have dated the year from the accession of the reigning emperor.

The Cæsarean era of Antioch was instituted in consequence of the victory of Pharsalia, gained by Julius Cæsar in the year of Rome 706 and B. C. 48.

The era of Nabonassar began Feb. 26, B. C. 747. It continued until the death of Alexander the Great, and was thence brought down to the reign of Antoninus Pius.

The Hindoo era is quite complicated, and its elucidation has given rise to much controversy. The current era—the fourth—of the world's existence, the Kall-yug, began B. C. 3101.

The French Republic era began Sept. 22, 1792. The Republican calendar was first used Nov. 26, 1793, and was discontinued Dec. 31, 1805, when the Gregorian was resumed.

The Persian era began on the accession of King Yezdegird to the throne of Persia, June 16, A. D. 632. The Persian year was readjusted 1075, and the system continues to the present time.

The Jewish era was adopted in the fifteenth century. The Jews date from the creation of the world, which they

place 3760 years and 3 months before the Christian era.

The Alexandrian era of the creation of the world was fixed at 5502 years B. C., so that A. D. 1 corresponds with the Alexandrian year of the creation 5503. This computation was continued until the year A. D. 284, but the next year ten years were subtracted.

The era of Spain began at the conquest of that country by Augustus, B. C. 38. It was adopted in Portugal, Africa, and the southern provinces of France. It was abolished in Catalonia in 1180, in Aragon 1350, Valencia 1358, and Castile 1393, but prevailed in Portugal as late as 1415 or 1422.

The Grecian era commences in the year of Rome 442, twelve years after the death of Alexander, B. C. 311. This era is still in use among almost all the people of the Levant. The Jews, when they became subject to the kings of Syria, adopted it, and did not abandon it for the one now used by them until within the last 400 years.

The era of Constantinople, which was adopted in that city before the middle of the seventh century, likewise commenced with the creation of the world, which is assigned to B. C. 5508. The Russians followed this calculation until the reign of Peter the Great, having received it from the Greek church, by which it is still used.

Evangelical Lutheran Church, Seventeenth and Pine sts., Detroit, organized Aug. 27, 1865; dedicated first building Nov. 5, 1865

on Trumbull near Michigan ave., removing to present site 1871, where the new church was dedicated Jan. 12, 1873. Size, 112 by 48 feet, with gallery; seating capacity, 900; communicants 1286. Officers:



REV. K. L. MOLL.

Zion Evangelical church, Welch ave., 1882; Bethlehem Evangelical, McKinstry ave., 1887; Emmaus Evangelical, Twelfth and Lysander sts., 1889. Sunday services at 10 and 2:30.

Rev. K. L. Moll, pastor, was born in Germany Aug. 15, 1839; graduated St.

Louis, Mo., 1864; was ordained June, 1864, at Riverdale, Ill., and came to Detroit Feb. 6, 1866, as first pastor of this church. Residence, 423 Seventeenth st.

Events of 1890.—See Appendix.

Execution, Methods of.—Executions are public in Austria, the Netherlands, and Portugal, by the gallows; in Russia, by gallows, musket, or sword; Ecuador and Oldenburg, musket; fifteen cantons of Switzerland, sword; China, sword or cord; Spain, the garrote; Belgium, Denmark, France, two cantons of Switzerland, the guillotine. Private executions, in two cantons of Switzerland, Bavaria, Hanover, and Saxony, by the guillotine; Great Britain and the United States generally by the gallows, except in New York by electricity; Brunswick, by the axe; Prussia, by the sword. Capital punishment has been abolished in Italy and some of the United States.

Explosives.—The following is a law of Michigan, going into effect Oct. 1, 1889:

The People of the State of Michigan enact, That every druggist, grocer, or other person who shall sell and deliver at retail any gasoline, benzine, or naphtha without having the name thereof and the words "Explosive when mixed with air," plainly printed upon a label securely attached to such can, bottle, or other vessel containing the same, shall be punished with a fine of not exceeding \$100.

Extravagance.—At a ball in New York City, in February, 1888, the walls were lined with roses, at a cost of not less than \$10,000. One lady of fashion puts \$1000 upon the funeral of her poodle dog; another buys \$60 night-ropes, unwashable, and so thrown aside after one brief period of use. One millionaire's palace has a \$40,000 portico; another, on "Nob Hill," San Francisco, a \$60,000 fence; and another, in Syracuse, N. Y., a \$700,000 stable.

Eyes, Care of.—The following is the last and best series of rules that we have seen in print:

1. Sit erect in your chair when reading, and as erect when writing as possible. If you bend down you not only gorge the eyes with blood, but the brain as well; and both suffer. The same rule should apply to the use of the microscope. Get one that will enable you to look at things horizontally, not always vertically.

2. Have a reading-lamp for night use. In all reading the light should be on the book or paper and the eyes in the shade. If you have no reading-lamp turn your back to the light, and you may read without danger to your eyes.

3. Hold the book at your focus; if that begins to get far away get spectacles.

4. Avoid reading by the flickering light of the fire.

5. Avoid straining the eyes by reading in the gloaming.

6. Reading in bed is injurious as a rule. It must be admitted, however, that in cases of sleeplessness, when the mind is inclined to ramble over a thousand thoughts a minute, reading steadies the thoughts and conduces to sleep.

7. Do not read much in a railway carriage. I myself always do, however, only in a good light; and I invariably carry a good reading lamp with me to hook on behind me. Thousands of people would travel by night rather than by day if the companies could only see their way to the exclusive use of the electric light.

8. Authors should have black-ruled paper instead of blue, and should never strain the eyes by reading too fine types.

9. The bed-room blinds should be red or gray, and the head of the bed should be toward the window.

10. Those ladies who not only write, but sew, should not attempt the black seam by night.

11. When you come to an age that suggests the wearing of spectacles, let no false modesty prevent you from getting a pair. If you have only one eye, an eyeglass will do; otherwise it is folly.

12. Go to the wisest and best optician you know, state your wants and your case plainly, and be assured you will be properly fitted.

13. Remember that bad spectacles are most injurious to the eyes, and that good and well-chosen ones are a decided luxury.

14. Get a pair for reading with, and if necessary a long-distance pair for use out of doors.

Fabrics, how Named.—Damask comes from the city of Damascus; satins from Sayton, China; calico from Calicut, India, formerly celebrated for cotton cloth and where the printing of calico was first tried; muslin from Mosolin, Asia; alpaca is an animal of the llama species, whose wool serves to make the fabric also so named; taffetta is entitled for a street in Bagdad; cambric from Cambrai; gauze from Gaza; baize from Bajac; dimity from Damietta; jeans from Jean; drugget from Drogheda, Ireland; duck from Torque, Normandy; blanket after Thomas Blanket, a famous clothier connected with the introduction of woollens into England, 1340; serge from zerga, Spanish for a peculiar woolen blanket; velvet from Italian *vell'uti*, which means woolly; shawls from the Sanskrit *salam*, floor, because shawls were originally laid on the floor like carpets; bandana from an East Indian word to bind or tie, because it is tied in knots before being dyed; chintz from the Indian *chott*; delaine, French, "of wool."

Faculties, Unknown.—The important suggestion has recently been made that while we have but five senses, others might well be supposed capable of taking cognizance of the effect of vibrations upon the ear or eye, between the 40,000 in a second beyond which

sounds cease to be audible and the 400,000,000,000,000 which give the sensation of red, or the lowest perception of color. The Popular Science Monthly says: "We find in animals complex organs of sense, richly supplied with nerves, but the function of which we are as yet powerless to explain. There may be fifty other senses as different from ours as sound is from sight; and even within the boundaries of our own senses there may be endless sounds which we can not hear, and colors as different as red from green, of which we have no conception. These and a thousand other questions remain for solution. The familiar world which surrounds us may be a totally different place to other animals. To them it may be full of music which we can not hear, of colors which we can not see, of sensations which we can not conceive."

Famous People.—Popular names:—John Adams, the Colossus of Independence, John Quincy Adams, the Old Man Eloquent. Sam Adams, the Cromwell of New England. Alexander I., the Coxcomb Czar. Aristophanes, Father of Comedy. Attila, Scourge of God. Thos. H. Benton, Old Bullion. James G. Blaine, Magnetic Statesman. John Brown, Old Osawatomie. James Buchanan, Old Public Functionary. Robt. Burns, Ayrshire Bard. John Calvin, Pope of the Reformation. S. P. Chase, Father of Greenbacks. Grover Cleveland, Man of Destiny. Henry Clay, Mill-boy of the Slashes, Great Pacificator. S. S. Cox, Sunset Cox. Oliver Cromwell, Old Noll. S. A. Douglas, Little Giant. Benj. Franklin, Poor Richard. J. C. Fremont, Pathfinder of the Rockies. J. A. Garfield, Teacher-President, Martyr-President. U. S. Grant, Unconditional Surrender. Horace Greeley, Sage of Chappaqua. Alex. Hamilton, Alexander the Coppersmith. W. H. Harrison, Cincinnati of the West. Washington Irving, Prince of American Letters. Andrew Jackson, Old Hickory, Big Knife. T. J. Jackson, Stonewall Jackson. Thos. Jefferson, Sage of Monticello. Henry Lee, Light-horse Harry. R. E. Lee, Uncle Robert. A. Lincoln, Honest Old Abe, Rail-splitter, Martyr-President. Jas. Madison, Father of the Constitution. Francis Marion, Swamp Fox, Bayard of the South. Ossian, Celtic Homer. Geo. H. Pendleton, Gentleman George. Jas. K. Polk, Young Hickory. Israel Putnam, Old Put. John Randolph, Political Meteor. Thad-

deus Stevens, Great American Commoner. Zachary Taylor, Old Rough and Ready. S. J. Tilden, Sage of Greystone. Martin Van Buren, Little Magician. George Washington, American Fabius, Father of his Country. Anthony Wayne, Mad Anthony. Dan'l Webster, Expounder of the Constitution. For nicknames of leading Union Generals, see the Journal Year-book for 1890, page 40.

Farm Products.—Few persons have an adequate concept of the immense annual aggregate of these in the United States, which a competent writer (Mr. Rowland Hazard of Rhode Island) estimates at \$3,600,000,000. The estimated value of the product of Indian corn for 1888 is \$677,561,580; wheat, \$385,248,030; oats, \$195,424,240; potatoes, \$81,413,589; barley, \$37,672,032; rye, \$16,721,869; buckwheat, \$7,627,647; hay, \$408,499,565; cotton, \$292,139,209; tobacco, \$43,666,665; total, \$2,145,974,426. Reports of the U. S. Department of Agriculture for the fiscal year 1886-7 show a product of fruits worth \$175,000,000; sugar and syrup, including honey, \$33,500,000; and from market gardens, \$68,000,000. The agricultural exports of 1889, excluding sugar and molasses, amounted to \$529,747,396, or 72.5 per cent of our total exports.

Farmers' Societies.—A number of these have developed in considerable strength since the Civil War. The best known of them, the Patrons of Husbandry, or Grangers, was organized in 1867. It is not a political society, as are most of the later associations. The Agricultural Wheel has for some years been an important, though not a commanding, element in the politics of Arkansas. In 1873 the National Farmers' Alliance and Co-operative Union, briefly known as the Farmers' Alliance, originated in Texas, and has of late years become a formidable organization. As a political party it carried the State of Georgia last October by large majorities, electing three-fourths of the Legislature. It is said to be completely organized in every Southern State except West Virginia, last year nominated State tickets in Minnesota and other Northern States, and is full-formed as a party in every Western and Northwestern State but Michigan (where a State Alliance is organized, however), California, Oregon, and Washington. It numbers at least 2,000,000 members, in

about 25 States. It is a secret society, having for leading objects in the North the lending of money by the Federal Government to farmers at a nominal interest; in the South, the "agricultural sub-treasury scheme," or the founding of Government warehouses for the deposit of corn, wheat, oats, cotton, and tobacco, upon which advances of public money shall be made; and generally, the ownership and operation of all railroads by the Government, with other important measures. There are also the National Farmers' League (non-secret, but political), the Northwestern Alliance, the Farmers' Mutual Benefit Association, and the National Colored Farmers' Alliance. Large numbers of agriculturists are among the Patrons of Industry and other workingmen's societies.

Fences.—The following tables will be found useful:

RAILS AND POSTS FOR EACH TEN RODS OF POST-AND RAIL STRAIGHT FENCE.

Length of Rail, ft.	Length of Panel, ft.	Number of Panels.	Number of Posts.	Rails for each 10 Rods.			
				Five Rails high.	Six Rails high.	Seven Rails high.	Eight Rails high.
10	8	205	21	103	123	144	165
12	10	164	17	83	99	116	133
14	12	133	14	69	84	95	109
16½	14½	111	12	57	69	81	93

RAILS, RIDERS, AND STAKES FOR EVERY TEN RODS OF ZIGZAG FENCE.

Length of Rail, ft.	Deflection from right line, ft.	Length of Panel, ft.	Rails for each 10 Rods.				
			Five Rails high.	Six Rails high.	Seven Rails high.	Stakes.	Riders (single).
12	6	8	103	123	144	42	21
14	7	10	83	99	116	34	17
16½	8	12	69	84	95	28	14

Farms.—Anticipating the conclusions of the Eleventh Census, the total farm area of the country is estimated at 653,000,000 acres, 370,000,000 of them improved. By the end of the century it is figured that the improved area must be increased to 486,000,000 acres, in order merely to support our population. In the whole world the country having the largest ratio of cultivated to uncultivated land is Denmark; the smallest, Russia. Great Britain has 29 per cent tilled, to 71 untilled.

First Congregational Church, Detroit, still occupies the old building at Fort St. west and W yne, but will soon re-

move to its beautiful new edifice at Woodward and Forest avenues. The church was organized Dec. 25, 1844 and built its first house of worship (now a carriage warehouse) at Jefferson ave. and Beaubien st., removing to its present



REV. W. H. DAVIS.

structure in 1854. The building and grounds cost \$56,000. The Second church, on Woodward ave. and Sibley st., was originally colonized from the First. Pastor W. H. Davis, b. Chelsea, Vt., April 23, 1851, entered the ministry at Beverly, Mass., June, '77, and came to his Detroit pastorate May, 1884. Residence, 17 Joy st.; at home early and late afternoons.

First Baptist Church, Detroit, org. Aug, 1827, with ten members; Rev. Henry Davis, first pastor; first house

dedicated 1834, on the northwest corner of Fort and Griswold sts. The second house on the same lot was occupied in 1863; the third, now occupied on the corner of Cass ave. and Bag-st., was dedicated in



REV. Z. GRENELL.

1875. Property valued at \$80,000; membership, about 600. Woodward-ave., Twelfth-st., Warren-ave., and North Baptist churches are the direct offspring of this body. Sunday services—morning prayers at 10, preaching service 10:30 and 7:30, S. S. at 12, S. S. prayer-meeting 1:15, young ladies' Bible-class 3:45, young people's meeting 6:30, after-meeting 8:45. Meetings for prayer and conference Wednesday 7:30, teachers'

meeting and normal class Friday at 7:30 and 8:15. The public are cordially welcome to all; pew-holders freely offer hospitality, and to remove the least occasion for embarrassment no seats are reserved on Sunday evenings. Rev. Z. Grenell, D. D., pastor, b. New York City, Feb. 25, 1841, ordained in Kingston, N. Y., Oct. 24, 1864, pastor there nine years, then for six years in Bay City, Mich., became pastor here July 1, 1879. Resides at 193 Charlotte-ave.; prefers to have his mornings unbroken, but is accessible at all times to those who need his services. Telephone number, 4230.

First French Baptist Church, Detroit, was formed in 1856, and with five branches in different parts of the

country numbers 264 members.

Property, about \$8000.

Trustees, Henry Gay,

H. Giroux,

J. Huard;

Pastor, Rev. R. B. Des

Roches, who

was born at

Montreal in

1826, came

to Detroit

1856, was

instrumental

in gathering

the French church, over

which he was ordained in 1857, and has

since remained their pastor. Residence,

93 Sherman st.; at home forenoons.

First German Baptist Church, Jos.

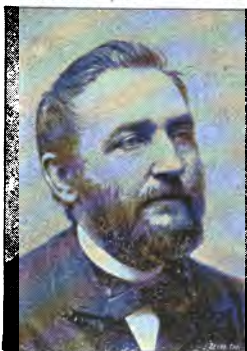
Campau ave. and Arndt st., Detroit,

was organized in 1864, with about 25

members,

and has now

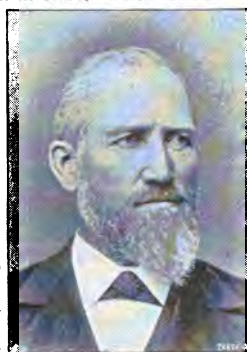
275. Meeting-



REV. R. B. DES ROCHES.

house and parsonage erected 1888; value, \$21,000; sittings in main room 500, with chapel 800. Sunday services 10 and 7:30, Sunday school at 2; Bible study Tuesday 7:30.

Young People's meeting Wednesday



REV. R. OTTO.

7:30, prayer-meeting Thursday 7:30. All seats free; everybody welcome. Rev. Reinhard Otto, pastor, was born Dec. 14, 1827, at Schoenberg, Hesse Cassel, Germany, came to America 1849, graduated from Seminary at Rochester 1866, was ordained Nov. 9 same year, and began pastoral labor with this church Aug. 1, 1886. Home at parsonage; receives 11 to 1 o'clock, except Saturday and Monday.

First Presbyterian Church, Detroit, (corporate title of congregation, "The First Protestant Society of Detroit"), is the mother of

Presbyterianism and all

Protestantism in this

city, having been organ-

ized in 1818. Its noble new

building, near comple-

tion at Woodward ave.

and Edmund Place, is of

Romanesque architecture,

with pyrami-

dal centre and fine clustered turrets.

The exterior throughout, church and

chapel, is of Lake Superior red sand-

stone; inside woodwork of oak, antique

finish; sittings, 1400; will be completed

early in 1891; chapel, seating 800, has

been in use for all services since May,

1890. Total cost with ground, \$165,000.

Communicant membership Nov., '90,

580; Sunday school, 500. Sabbath

services at 10:30 and 7:30; S. S., 12:15;

congregational prayer-meeting Wednes-

day evening. Public always cordially

welcomed.

The Rev. Marcus A. Brownson,

pastor, was born June 24, 1859, at

Washington, Pa.; entered ministry

April 28, 1880, and assumed his present



REV. M. A. BROWNSON.

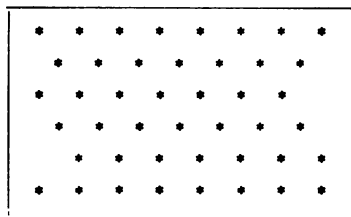
pastorate March 16, 1889. Residence, 51 Watson st.; telephone No., 4122.

Flags.—The flag of the United States, "the stars and stripes," or "star-spangled banner," was not fully formed

until January 20, 1782, when the war of the Revolution was practically over.

It had originally (in 1777) thirteen stars as well as stripes. Each State is entitled to add a star on the Fourth of July next after its admission. Idaho was admitted July 3, 1890, and hence

the flag now legally bears 43 stars. Wyoming's act of admission was not approved until July 10, and her star must wait until next year. When all are in, the "union" on our flag, as fixed by authorities at Washington, will bear them in this fashion:



In making a national flag, the union or field should be one-third its length, and cover seven stripes in breadth. The stars are five-pointed. The regulation flag for infantry companies, 6 by 6½ feet, offers a good size for ordinary purposes. The red of our flag is held to represent courage, the white integrity of purpose, and the blue steadfastness, love, and faith. A "Presidential flag" was first suggested in 1882 by President Arthur, who himself devised it, and first used it on his sea-trip to Florida the next year. It shows when hoisted the presence of the head of the Government upon a vessel, as other great powers have a royal or imperial ensign, and consists simply of a blue field, with the Federal arms in the center.

The Confederate flag, or "stars and bars," adopted in March, 1861, bore three horizontal stripes of equal width, the two outer ones red, the middle one white, with a blue square in the upper corner next the staff carrying nine white stars in a circle. In September, 1861, a battle-flag was also adopted, for fear of confusion between the Federal and Confederate flags. It had a red field charged with a blue saltier or St. Andrew's cross, and a narrow border of white bearing nineteen stars. In 1863 the original flag was supplanted by one with a white field, having the battle-flag for a union, and afterwards a vertical red bar was thrown across the outer half of the field beyond the union.

Flags are used as symbols of rank and command, officers using them being called flag-officers. They are square, to distinguish them from other banners. To "strike a flag" is to lower the national color in token of submission.

A "flag of truce" is a white flag displayed to an enemy to indicate a desire for a parley or consultation. It is a sign of peace. After a battle parties from both sides often go out to the field to rescue the wounded or bury the dead, under the protection of a white flag. The red flag is a sign of defiance, often used by revolutionists. In our service it is a mark of danger, and shows a vessel to be receiving or discharging her powder. The black flag is a sign of piracy. The yellow flag shows a vessel to be at quarantine, or is the sign of contagious disease. A flag at half-mast means mourning. Fishing and other vessels return with a flag at half-mast to announce the loss or death of some of the men. Dipping the flag is lowering it slightly and then hoisting it again to salute a person, a body of troops, a vessel or fort.

[See also "Crosses," in this book.]

Flies.—The common house-fly is now well recognized as a carrier of contagion. Even the bacillus of consumption is found in the intestines of flies fed upon the spittle or pus of patients suffering from this disease. What is known as granular ophthalmia can be conveyed by them. Malignant pustule has formed on the bite of a horse-fly. The late Father Damien attributed his leprosy to the inoculation, through the agency of flies, of a small wound on the scalp. To escape these insects entirely one must go out to sea, but on land they are least troublesome where there is least filth. Cleanliness in home and premises, therefore, is an important means of prevention against the intruders.

Flower Show.—The Detroit Floral and Musical Charity Festivals of 1889 and 1890 were popularly known by the above name. They were organized and managed by the DETROIT JOURNAL, the entire net proceeds being divided among the co-operating Detroit charities. They were artistic and financial successes, and made so by the very hearty co-operation of the ladies of Detroit, the florists, artists, and musicians; in fact, all who were requested to assume any duty or responsibility, accepted and executed the trust with enthusiasm and fidelity. The possibility of repeating it in 1891 was fully canvassed before the expiration of the last festival, but the ladies generally expressed the desire to let it "rest for at least a year or two." The lack of adequate accommodation

will be the greatest difficulty in any future attempt, as the combined rink and armory were insufficient to accommodate the crowds which filled the buildings to the extreme limit of their capacity. When the question of building has been solved, the JOURNAL has a plan which it will submit, that will be an artistic advance upon the last exhibition. The first festival used only a selected flower, and the booths were erected to be in accord with the flower. The last exhibition retained the selected flower and added the attractive feature of a selected country as well, which necessitated the building of the booths



in the architecture of these countries, and the ladies costuming in the dress of the countries represented. The next festival could retain each of the former features and add that of the selection by each of the charities of some specific building and event in each country, thereby introducing the historical element. As before stated, when the participants in the last festival are rested and ready, and the proper building accommodations have been found, the DETROIT JOURNAL will be ready to organize the Third Flower Festival. Probably all will agree that it should exceed in attractiveness any of its predecessors.

The First Floral Exhibition April 2, 3, 4, 5, and 6, 1889, was for the benefit of 21 of the Detroit charities. The total attendance was 34,501, and the net cash received from all sources was \$11,001.75, or an average of over \$500 for each charity.

The Second Festival, held April 22, 23, 24, and 25, 1890, was for the benefit of 23 Detroit charities. The attendance was 52,286, and would have been several thousand additional, but that it was necessary three times to close the doors against crowds that were struggling to gain admission. The net cash receipts from all sources were \$18,919.41, or an average to each of the 23 charities of \$822.59.

No attempt can be made adequately to describe this festival, or to give credit to the hundreds worthy of personal mention for sacrifices made and services rendered, without danger of making distinctions that might be considered invidious. Two conspicuous exceptions, however, will probably be permitted without offense. Messrs. Farrand and Votey erected a grand organ in the rink and donated its use, thereby greatly contributing to the success of the musical feature. Messrs. Pitcher and Manda, florists, of Short Hills, New Jersey, brought to Detroit and exhibited several thousand dollars worth of orchids, making a display of these rare flowers that the judges themselves said was of very exceptional quality.

The selection of the picture of the booth erected for the House of the Good Shepherd, representing ancient Greece in architecture and dress, was not because it exceeded the others in artistic excellence, but because it seemed more adapted for the purpose of illustration. It will give, to those who did not attend the festival, some idea of the care and taste, as well as money expended in erecting all the booths. It is to be regretted that the photographing of the booths was not more successful, the one in the above illustration being about the only one clear enough to reproduce in an engraving by the half-tone process used in this Year Book.

One of the most interesting features of the enterprise was the hearty co-operating of Protestants, Catholics, and Jews, the English, German, and French representatives of whom worked side by side in most perfect accord, sharing equally in the net receipts from the "gate" money.

Not less than 400 ladies lent themselves to the work, with a will that took no denial, and for this reason chiefly the Floral and Musical Charity Festival of 1890 will long be remembered as one of the most important epochs of Detroit society.

Foley, John Samuel, Bishop of the See of Detroit, is of an old County Wexford family, whose progenitors in this country settled in 1817 in Baltimore, where he was born Nov. 5, 1833. He is a brother of the late Bishop of Chicago, died Feb. 19, 1879; was educated at St. Mary's College and Theological Seminary, Baltimore, and the Apol-



BISHOP FOLEY.

linaris or Roman Diocesan Seminary in Rome; received tonsure and minor orders in the former city from Archbishop Kenrick, and the priesthood in the church of St. John Lateran, Rome, from Cardinal Patrizzi, Dec. 20, 1856; was made D. D. in 1857 and returned to America. His first pastoral labors were at St. Bidget's, Canton, near Baltimore, and at Port Deposit and Havre de Grace. After further service at Ellicott City, he became assistant pastor of St. Peter's church, Baltimore, and built up St. Martin's church at the west end of that city, of which he took charge in 1867, and remained with it nearly until appointed to the See of Detroit. He was consecrated Bishop by Cardinal Gibbons at the Cathedral in Baltimore Nov. 4, 1888, and on the 23d was welcomed to Detroit with a street-parade and other demonstrations, perhaps never excelled on a like occasion in this country, certainly not in the Northwest.

The Catholic Church was the pioneer in Michigan, and has always been strong in the State. Its missions were planted numerously at the north in the 17th century, and the Black-robcs came to Detroit with Cadillac July 24, 1701, erecting their rude little church of Ste. Anne within the limits appointed for Fort Pontchartrain the second day after arrival. Father Rese was the first Bishop of Detroit. The See of Detroit is now separated into the Suffragan Sees of Detroit, Grand Rapids, and Marquette. The church has 31 churches and missions in Detroit and suburbs, gathered in English-speaking, French, German, Belgium-Holland, Polish and

Slavic, and Bohemian congregations; and about 350 in the State.

Foods, Adulteration of.—Under the stringent laws that have been passed in many States and countries, there is less of this than formerly. Analyses of 15,000 to 18,000 articles annually were made by the British Government during the eight years 1875-82, and the percentage of adulteration in that period was reduced from 18.1 to 16.5. By the law of Great Britain, passed in 1875 and modified in 1879, public analysts are appointed by local authorities to examine for fixed fees articles suspected of adulteration, and if so found complaint may be made to a magistrate and the offender prosecuted. The operation of this law has been beneficial. Germany has a similar law, and needed it, if the story current in that country be true, that of three flies which partook severally of flour, sugar, and fly-poison, the last was the only one that survived! Results are generally favorable from the few laws against adulteration that have been passed in this country, but the best are in Canada, where adulteration was reduced from 51.66% in 1876 to 25.66 in 1882. Reports from State Analysts of that date and later indicate considerable adulteration still prevailing, but not much of it injurious—the mixture of foreign substances is called rather “sophistication,” and in 1885 was held to be about as follows: Spices and condiments 66%, olive oil and syrups 60, milk not inspected 50, tea 48, ground coffee 45, cream of tartar and baking powder 44, butter 40, bread only about 2, and flour none. The principal adulterant of candies and sweet foods is glucose, a preparation from corn, costing but half as much as sugar; but it is itself a healthful food, as the chemists stoutly affirm. Pure glucose syrup is sometimes used to represent honey, even imitation cells of paraffine being made to hold it. Most other adulterants are not harmful, though they weaken the article, as exhausted spices used to “sophisticate” condiments and spices. The common adulterations of milk are water, alkalies, and various preservatives, and it is further impaired by abstracting the cream. The milk-supply of New York City formerly contained 25% of water; but it has improved in this and other cities under official inspection. The supply in Detroit is fairly good, much better than in many cities, and complaints are not loud of other adulterations. Oleomargarine was

originally considered an adulterant of butter, but it is now commonly sold under its own name and on its own merits.

Fort-st. Congregational Church, Detroit, organized June 23, 1881, occupied a mission building erected in 1879, and dedicated its present chapel at Fort St. west and Summit ave., in Oct. 1888. Sittings, 350; value of church, \$8500; members, 112; Sunday services, 10:30 and 7:30; Sunday-school at 12; prayer-meetings Wednesday and Friday evenings. Rev. J. M. Robinson, late pastor, was born in Cass Co., Mich., July 31, 1847; became a licentiate in 1870, an ordained minister 1874, and pastor of this church Sept. 1, 1887, resigning his pastorate Oct. 31, 1890, to become State Evangelist in Michigan, under the American Home Missionary Society.



REV. J. M. ROBINSON.

Fort-st. Presbyterian Church, Detroit, was organized Feb. 21, 1849, with 26 members, and in 1853 occupied its present site with a handsome and commodious structure. In 1877 it was destroyed by fire, but at once rebuilt in its present shape, confessedly one of the finest church edifices in the country. The General Assembly of the church met here in 1872, and will again meet here in 1891. Seats, 1400; value of property, \$150,000; membership, 750. Open for benevolent or religious work nearly every day or evening; the public cordially welcomed. The Rev. Wallace Radcliffe, D. D.,



REV. W. RADCLIFFE.

pastor, is a native of Pittsburgh and an alumnus of Washington and Jefferson College and of Princeton Theological Seminary. He was ordained in Philadelphia June, 1866, and received D. D. from Lafayette College 1878; has held pastorates in Philadelphia, Reading, Pa., and Detroit; and been Moderator of Pennsylvania and Michigan Synods, and delegate to the Pan-Presbyterian Councils in London, Eng., 1875 and 1888. He assumed his present pastorate Sept., 1885, and has since received 206 members and raised for religious and benevolent work of the church \$129,359.

Gambit's.—All students of chess-playing will be interested in the following full list of gambits or openings. The most famous are the Evans, King's Bishop's, and Scotch Gambits. Allgaier, 1 P to K 4, P to K 4; 2 P to KB 4, P takes P; 3 Kt to KB 3. P to K 4; 4 P to KR 4, P to Kt 5; 5 Kt to Kt 5. Center, 1 P—K 4, P—K 4; 2 P—Q 4, P takes P. Center-counter, 1 P—K 4, P—Q 4; 2 P takes P. Cunningham, 1 P—K 4; P—K 4; 2 P—KB 4, P takes P; 3 Kt—KB 3, B—K 2; 4 B—B 4, B—R 5 (ch). Damiano, 1 P—K 4, P—K 4; Q Kt—KB 3, P—KB 3; 3 Kt takes P. Danish, a development of Center by 3 P—QB 3. Evans, 1 P—K 4, P—K 4; 2 Kt—KB 3, Kt—QB 3; 3 B—B 4, B—B 4; 4 P—Q Kt 4. Greco counter, 1 P—K 4, P—K 4; 2 Kt—KB 3, P—KB 4. Kieseritzki, same as Allgaier, but in fifth move Kt is played to K 5. King's Bishop, 1 P—K 4, P—K 4; 2 P—KB 4, P takes P; 3 B—B 4. King's 1 P—K 4, P—K 4; 2 P—KB 4. Lopez, 1 P—K 4, P—K 4; 2 B—B 4, B—B 4; 3 Q—K 2, Kt—KB 3, or P—Q 3, or Q—K 2; 4 P—B 4. Muzio, 1 P—K 4, P—K 4; 2 P—KB 4, P takes P; 3 Kt—KB 3, P—KKt 4; 4 B—B 4, P—Kt 5; 5 castles, or P—Q 4, or Kt—B 3, P takes Kt. Queen's, 1 P—Q 4, P—Q 4; 2 P—Q B 4. Queen's-pawn counter, 1 P—K 4, P—K 4; 2 Kt—KB 3, P—Q 4. Salvio, 1 to 4, same as Muzio; 5 Kt—K 5. Scotch, 1 P—K 4, P—K 4; 2 Kt—KB 3, Kt—QB 3; 3 P—Q 4. Steinitz, 1 P—K 4, P—K 4; 2 Kt—QB 3, Kt—QB 3; 3 P—B 4, P takes P; 4 P—Q 4.

Gas, Natural—The first use of natural gas in this country was on Washington's tract, near Charleston, W. Va., in

1841, where a "burning spring" had long been a curiosity. Gas was known to exist at Findlay, O., in 1836; but the first well was not sunk until December, 1885. Within 3½ years thereafter, or by June 1, 1889, 53 wells were in operation there, with a daily yield of 215,000,000 cubic feet. The gas-field in Ohio is 36 miles long and 9 miles wide. At Findlay the gas is found in Trenton limestone, 1092 to 1312 feet below the surface. It is from this region that Detroit is supplied. Findlay has grown from 4879 population in 1885 to about 30,000 in 1890.

Generals, Mortality of Union.—Gen. Thomas died at 54 years of age; Sheridan, Meade, Burnside, and Halleck, at 57; McClellan, 59; Grant and Hancock, 59; Hooker, 65; McDowell, 67; Fremont, 77. Sherman is still living, in his 71st year; and Rosecrans, also about 71.

Geography, Comparative.—One of the most interesting and informing methods of studying geography, in the schools or privately, is by comparison. In the matter of comparative area, for example, the United States with Alaska cover one fifteenth of the land-surface of the world, and one fifty-fifth of its entire surface. Texas is as large as France, Holland, and Belgium united. California is about five times as large as Ireland, and would almost contain the whole of New England, with New York, Pennsylvania, and Delaware. Its five southern counties are together nearly as large as Ohio and Connecticut. The entire population of the United States might be placed in North and South Dakota, with an acre and a half of land to each man, woman, and child. Michigan is little larger than Wisconsin, Illinois, Iowa, Arkansas, or Florida, but would contain Mississippi or Louisiana approximately 1½ times, Ohio, Kentucky, Virginia, or Tennessee 1½ times, Indiana 1½, South Carolina 1½, Maine or West Washington twice, New Hampshire, Vermont, or Maryland 7 times, Massachusetts 7, New Jersey 7½, Connecticut 12, Delaware 30, Rhode Island 53, Roumania 1½, Scotland or Hayti 2, Bulgaria or Greece 2½, Servia or Costa Rica 3, Switzerland, 3½, Denmark 4, Belgium 5, the Sandwich Islands 9, Saxony 10, Montenegro 16½ times. By the admission of six new States, Michigan passes from the eleventh to the seventeenth of States in relative largeness of area.

Other interesting facts: Nebraska is more than twice the size of Indiana; Texas is four times as large as the New England States; Dakota is larger than England, Ireland, and Scotland together; the population of London is equal to that of all Canada, or that of New York State, including its cities; Kentucky and Portugal are about the same size; Cuba and Tennessee are equal in area; Brazil is nearly as large as the United States, but the population of the latter is six times that of the former; the populations of Canada, New York State, Ireland, and Belgium are about the same; if all the people of Canada and of the United States were placed in the State of Texas, the number of persons to the square mile would be fewer than at present in China; the population of Canada is double that of Australia; Colorado is as large as New York, Pennsylvania, and New Jersey together; it would take ten States as large as Massachusetts to make one as large as Kansas; there are more people in the cities of New York and Brooklyn than in the State of Massachusetts, including its cities; there are as many people in Chicago as in Connecticut; there are 27 States and Territories each larger than New York; Oregon is equal in area to New York and Pennsylvania; Massachusetts is smaller than New Hampshire or Vermont; Minnesota is twice the size of Ohio; the three States bordering on the Pacific are larger than the thirteen States bordering on the Atlantic; Montana is thirty times larger than Connecticut; the Dakotas are four times as large as Indiana; Iowa is five times as large as Belgium, and four times as large as Denmark; Maryland and Switzerland are about the same size; Canada is almost as large as the United States, including Alaska.

Geography, Stanley's Latest Discoveries.—They consist mainly in his find of one of the most remote sources of the Nile, and laying down the water parting of the Nile and the Congo. He also traversed a broad stretch of practically new country, and added much information about its physical features and inhabitants. The Ruwenzori or Ruwenjura mountains he now identifies with the "Mountains of the Moon" of the old geographies.

German Church of the Evangelical Association, Dubois and Catherine sts.,

Detroit, has a brick edifice and parsonage, built in 1883, and worth \$7,500, the former seating 200, with a chapel of 50 seats. Membership, 108. Services: Sunday preaching at 10:30 and 7:30, Sunday-school at 9:30; prayer-meetings Tuesday and



REV. A. HALMHUBER.

Wednesday at 7:30; Bible-class Friday at 7:30; children's catechetical class 2 to 4 on Saturday. Free seats. Rev. A. Halmhuber, pastor, was born April 5, 1850, at Stuttgart, Germany, entered the ministry July, 1871, at Strasburg, was pastor in Germany and Switzerland till '76, missionary at Osaka, Japan, '76-'82, came to Michigan in May, '85, and to his Detroit pastorate April, 1889. Resides at 305 Dubois st.; usually at home forenoons.

Gifts permissible in good society were formerly limited to books, flowers, candy, fruits, and articles of trifling value. Now every thing is countenanced but wearing apparel. Towering palms, little beds or mosses and ferns in beautiful baskets, come from the florist. All manner of jewels, silver, crystal, and porcelain goods are sent to the mother or guardian of the lady admired; and twelve-inch paper knives, sofa pillows and blankets, cabinets filled with stationery, umbrellas, hand-mirrors, opera glasses, lorgnettes, and traveling flasks are among the oddities with which beauty is favored.

Girls, Age of Protection for:—In Delaware, 7 years (!); Alabama, California, Colorado, Florida, Georgia, Iowa, Maryland, Minnesota, Mississippi, Montana, New Jersey, North Carolina, South Carolina, Texas, Utah, and New Mexico, 10; Virginia, West Virginia, Missouri, Kentucky, Indiana and Idaho, 12; Maine and New Hampshire, 13; Illinois, Michigan, Oregon, Wisconsin, Vermont, Ohio, Connecticut, Massachusetts, Arizona, North Dakota, South Dakota, and Wyoming, 14; Nebraska, 15; Washington and District of Columbia, 16; Kansas, 18; Rhode Island, Arkansas, and Louisiana, no age fixed.

Girls' Toilet Articles.—According to The Family Doctor, a sensible girl will not keep a lot of cosmetics and drugs on her toilet-table, but there are a few articles she should always have in a convenient place. She should have an array of glass-stoppered bottles containing alcohol, alum, camphor, borax, ammonia, and glycerine or vaseline. A little camphor and water may be used as a wash for the mouth and throat, if the breath is not sweet. Powdered alum applied to a fever-sore will prevent it becoming very unsightly and noticeable. Insect-stings or eruptions on the skin are removed by alcohol. A few grains of alum in tepid water will relieve people whose hands perspire very freely, rendering them unpleasantly moist. We should recommend care in the use of scented soap; in many cases the perfume is simply a disguise for poor quality. A good glycerine- or honey soap is always preferable. Of course one may rely on scented soap from a high-class manufacturer, but it costs more than it is worth. In addition to the soap for bathing, white castile should be kept for washing the hair. Occasionally a little borax or ammonia may be used for this purpose, but it is usually too harsh in its effects.

Glaciers in the United States.—An unexpected number have been discovered. Mount Tacoma, or Rainier, near Puget Sound, is reported to carry eighteen upon its sides, one of them ten by (in places) four miles in size. Mt. Baker, farther north, has a smaller system. Mt. Hood, Oregon, also in the Cascade Range, has three ice-streams; and several mountains of the Coast Range have numbers of them. Mt. Shasta in Northern California has several fine ones; and there are 16, mostly small, in the Sierras east of the Yosemite Valley. There are a few little ones in the Rocky Mountains among the Wind River summits in Wyoming and the Flathead River sources in Montana; but the high Rockies are mostly devoid of them, from the dryness of their atmosphere. Of course, Alaska has glaciers galore, and of most magnificent dimensions. A scientific expedition returning thence last October, reported the great Piedmont glacier, about the base of Mt. St. Elias, as covering an estimated area of 1000 square miles.

Gold.—The relative value of gold to silver, in many ages of history, has been about as follows: In the time of

Abraham, 1 to 8; 1000 B. C., 1 to 12; 500 B. C., 1 to 13; 1 A. D., 1 to 9; 500, 1 to 18; 1100, 1 to 8; 1400, 1 to 12; 1545, 1 to 6; 1551, 1 to 2; 1600, 1 to 10; 1627, 1 to 13; 1700, 1 to 15½; 1876, 1 to 20; 1886, 1 to 28½, the highest point yet reached. The great gold nuggets of Australia are the "Welcome Stranger," 190 lbs., worth nearly \$50,000; the "Welcome," 185 lbs., \$44,000; and the nugget of 1853, 1620 oz., \$32,000. These and many smaller ones may be seen in models at the Melbourne Public Library.

Grand Army of the Republic.—This order will be especially prominent in Michigan this year, from the holding in Detroit, during the first week in August, of the National Encampment, which will be attended by many thousands of members and visitors, including many famous ex-soldiers. The first Post of the Grand Army was



GEN. L. W. G. VEAZEY.

founded with 12 members, April 6, 1866, in Decatur, Ill., at the instance of Maj. Stephenson, ex-Surgeon 14th Ill. Infantry. The first State Department was formed at Springfield, Ill., July 12, 1866, and Gen. John M. Palmer elected Department Commander. The first National Encampment was held at Indianapolis in November of the same year, when 11 States were represented, and Gen. S. A. Hurlburt of Illinois was elected Commander-in-chief. Judge Veazey of Vermont was chosen Commander-in-chief at the Boston Encampment last year. The Detroit meeting of 1891 will be the 25th or quarter-centennial Encampment, and very ample preparations are already being made for it. Probably not less than \$125,000 will be expended upon it. A General Committee of 150, representing mainly Detroit, but also other portions of the State, has been appointed, and the following officers chosen: General Chairman, R. A. Alger; General Secretary, Geo. H. Barbour; General Treasurer, M. W. O'Brien,—all of Detroit. An Executive Committee will be appointed,

and sub-committees on finance, accommodations, transportation, bureau of information, parade, reunions, entertainment, decorations, reception, printing, press, badges, grand stands, invitations and legislation. A grand excursion will probably be given the visiting delegates, to Mackinac and the Upper Peninsula.

Great Britain.—The area of the United Kingdom is 120,832 square miles; of British colonies and dependencies, nearly 9,600,000; total, about 9,700,000. Populations estimated in 1888, 37,453,574 and over 275,500,000, or an aggregate of 313,000,000. The Irish population has been decreasing since 1881 about 0.9 per cent a year, while the rest of the islands have been increasing in a little higher ratio.

Greatest Things.—The Bank of England is the most extensive banking institution in the world. It employs over 1000 clerks, and its building covers eight acres.

La Scala, Milan, is the finest theatre on the globe. Its stage is 150 feet wide, and there are six tiers of boxes.

"Paradise," by Tintoretto, is the largest painting. It is 84 feet wide and 32½ feet high, and is in the Doge's Palace at Venice.

The largest chain ever fabricated is in the Imperial Arsenal at Vienna, with 8000 links. It was thrown across the Danube in 1529 by the Turks.

The largest emerald discovered weighs 2980 carats, and is in the Schalthoem or Imperial Jewel-office at Vienna.

The largest collection of coins, 125,000, is in the cabinet of antiquities at Vienna; 50,000 are Greek and Roman.

The largest cannon is at Ghent, Belgium. The diameter of the bore is 2½ feet.

The largest organ is in the church of St. Bayon, Haarlem, Holland. It fills up the whole of one end of the vast edifice and reaches to the roof; has 5000 pipes, some of them 15 inches in diameter, and 60 stops.

The most celebrated whirlpool is the Maelstrom, southwest of the Lofoden Isles, off the coast of Norway. It is produced by the meeting of two opposing currents, and is a mile and a half in diameter.

The largest steam ferry-boat in the world is said to be the "Robert Garrett," between New York and Brooklyn, carrying 5000 passengers at once.

The largest saw-mill is at Clinton, Iowa, with seven band- and three gang-saws, and two batteries of ten boilers each. It cost \$200,000, and can saw 450,000 feet of lumber in eight hours, or nearly 60,000 feet an hour.

The largest steam derrick is in use at the docks in Hamburg, Germany, to load and unload vessels. It can handle a ten-wheeled locomotive and other immense weights with perfect ease.

The largest and heaviest building-stone yet quarried in England was got out from the Plankington quarry, Norwich, February, 1889, in one piece, without crack or flaw. It is 15 by 6 by 5 feet in size, and weighs over 35 tons.

Marshall Pass, on the Denver & Rio Grande R. R., 10,851 feet above the sea, as the highest point crossed by a railway in the United States, has been superseded by another pass in the high Rockies.

Half-tone Engraving.—This comparatively new process of making plates for printing direct from photograph negatives, has been employed for the illustrations for this Year-book. As they are made direct from negatives, they are more delicate and true to nature than can possibly be secured by hand cut work, even of steel engraving. Nearly all of the engravings of public buildings in the front of this book were from photographs taken by a photographer sent out by the DETROIT JOURNAL.

Hamtramck Presbyterian Church, east end of Detroit, org. Oct. 25, 1883, occupies a frame building seating 250, and has a property of \$7000; membership, 150. Sunday preaching services at 10:30 and 7:30; S. S. 11:30; young people's prayer-meeting 6:30; weekly prayer-meeting Wednesday evening Ladies' Aid and Home Missionary Societies 2:30



REV. HENRY S. JENKINSON.

P. M. Thursday; Foreign Missionary Society first Thurs. in month, 2:30 P. M. All seats free. Rev. Henry S. Jenkinson, pastor born 1856, Cheltenham,

Gloucester, Eng., was ordained June 18, '82, and came to this church March 8, '86. Residence, 120 Field ave.; receives Thursday and Friday afternoons.

Halloo and Hurrah.—These commonplace words have singular origins attributed to them. It is said that the people of Charnwood Forest, Leicestershire, Eng., when they desire to hail a person at a distance, call out not "halloo!" but "halloup!" and this is imagined to be a survival of the times when one cried to another, "A loup! a loup!" or as we would now say, "Wolf! wolf!" "Hurrah!" again is believed to be derived from the Slavonic *hura*, "to Paradise," which signifies that all soldiers who fell fighting valiantly went straight to heaven. "Prithee" is obviously a corruption of "I pray thee"; while "marry" was originally a method of swearing by the Virgin Mary.

Haven M. E. Church, Baggs and Sixteenth sts., Detroit, was organized 1872. Value of property, \$18,000; membership over 300; Sabbath-school, over 500; Epworth League, 125; Junior League, 115. Rev. G. L. Hanawalt, pastor, born in Licking Co., O., 1838, was educated at Oberlin University, entered North Ohio Conference 1870,



REV. G. L. HANAWALT.

was transferred to Detroit Conference 1889, and appointed to this charge. Residence, 507 Sixteenth st.

Hats—The plug- or stovepipe-hat was known at least as far back as the time of Albert Durer (1471-1528), who made a nobleman's crest of it among the marginal illustrations of a prayer-book.

Hiccoughs.—To cure them, sit erect and inflate the lungs fully; then, retaining the breath, bend forward slowly until the chest meets the knees, and after gradually rising again to an erect position, slowly exhale your breath. Repeat this process a second time, and the nerves will be found to have re-

ceived an excess of energy that enables them to perform their natural functions.

Hills to the Acre:—At $4\frac{1}{2}$ feet apart, 2722; $4\frac{1}{2}$, 2151; 5, 1722; $5\frac{1}{2}$, 1440; 6, 1210; $6\frac{1}{2}$, 1031; 7, 889; 8, 680; $8\frac{1}{2}$, 602; 9, 538; $9\frac{1}{2}$, 482; 10, 435; $10\frac{1}{2}$, 394; 12, 302; 13, 258; 14, 225; 15, 198; 16, 170; 17, 151; 18, 134; 20, 108; 25, 69; 30, 48; 35, 35; 40, 27.

Holidays.—The new Republic of Brazil has instituted an extraordinary system of holidays: Jan. 1, to celebrate universal brotherhood; April 21, the forerunners of national independence; May 3, discovery of the country; May 13, brotherhood of Brazilians; Sept. 7, in honor of Brazilian independence; Oct. 12, discovery of America; Nov. 2, in memory of the dead, a kind of Decoration Day; Nov. 15 (anniversary of the overthrow of the Empire, 1889), the glory of Brazil in general. Other national holidays: Canada, July 1, Dominion Day, celebrating the confederation of the Provinces; France, July 14, the destruction of the Bastille, 1789; Italy, Sept. 21, entrance of the Italian Army into Rome, 1870, completing the unification of the country; Mexico, May 5, a great victory over the French invaders.

Horse-power.—A horse can drag, by comparison with what he can carry on his back, about as follows: On the worst earth road, three times more; on a good macadamized road, nine; on plank, twenty-five; on a stone trackway, thirty-three; on a good railway, fifty-four times as much. On metal rails a horse can draw one and two thirds as much as on asphalt pavement; three and one third as much as on good Belgian blocks; five times as much as on ordinary Belgian blocks; seven as on good cobble stone; thirteen as on ordinary cobble stone; twenty as on an earth road; and forty times as much as much as on sand. The unit of horse-power, 33,000 pounds, raised one foot per minute, was established about a century ago by James Watt, who settled the figures in a curious way. Watt in his usual careful manner determined the average work which horses in his district could perform, and he found that the raising of 22,000 pounds one foot per minute was about an actual horse-power. He was then engaged in the manufacture of engines, and had almost a monopoly of the trade, but customers were so hard to find that

many artificial encouragements were necessary to induce power-users to buy his engines. As one method, Watt offered to sell engines reckoning 33,000 foot-pounds to the horse-power, or one-third more than the actual. And thus what was intended as a temporary expedient to promote business has been a means of giving the false unit of a very important measurement to the world.

The nominal horse-power for a boiler, according to the Government experts, is an evaporation of 30 lbs. or about half a cubic foot of water into steam at 70 lbs. steam pressure, with water fed into the boiler at 200° Fahrenheit.

The total horse-power of steam-engines in the United States was estimated a few months ago at 12,100,000, including locomotives and steamers.

Hours of Labor.—In New England sixty years ago, mills generally ran 13 hours a day the year round, but one in Connecticut kept running 14 hours, and the Eagle Mills, at Griswold, 15. The rules for mills at Paterson, N. J., required women and children to begin work at 4:30 A. M. Nowadays in Belgium 11 hours are the average working day, but brewers have from 10 to 17, brick-makers 16, cabinet-makers often 17, street-car drivers 15 to 17, railway-guards sometimes 19 $\frac{1}{2}$, women at heavy labor in mining districts 13 or 14. Saxony, 13, with 2 off for meals. Baden, 10 to 12, but often 15 in cotton-mills and stone-ware and china works, saw-mills 17, and sugar refineries 24 hours on and 24 off. In Russian factories 6 to 20. Portugal, usually sunrise to sunset; field-hands and building trades in summer, 4:30 or 5 A. M. to 7 P. M., 2 or 3 off middle of day, in winter 7:30 to 5, with shorter nooning; in factories 12 in summer, 10 in winter, 1 $\frac{1}{2}$ off for meals. Turkey, sunrise to sunset. Montenegro, in summer day-laborers begin between 5 and 6 A. M., and work till sunset, with an hour off at 8 and from 12 till 2 o'clock; in winter 7:30 or 8 to sunset, 1 off at noon. Same rules for skilled labor, but less strictness in practice.

Household Hints.—One pound of oat-meal contains as much nourishment as six pounds of fine flour; one pound of cracked wheat as eight loaves of baked bread, and a fresh egg as 1 $\frac{1}{2}$ ounces of fresh meat and one ounce of wheaten bread, but in a more digestible form.

Fruits are made up of water, with less of starch, gum, and sugar. They

serve often for drink instead of any other fluid, and their acids aid materially in digestion.

Boiled meat is more digestible, as well as more economical, than baked meat. Started in a little boiling water, and then cooked very slowly until perfectly tender, it is the best. Seldom if ever fry any kind of meat, if you care for health.

Cotton-seed oil, olive oil, and other vegetable fats are used now by our best cooks for frying cakes, fish, etc., and are certainly more clean and wholesome than common lard. These oils are easier of digestion, and more readily assimilate than animal fats.

Raisins can be stoned more easily when boiling water has been poured over them. Let them stand ten minutes, and then drain.

Drink water that has been boiled, if there is any fear of impurity. Pure water is free from bad odors, colors, or taste.

Dr. Johnson, of Brooklyn, makes the following suggestions as to canned fruits and meats: "Reject every can that does not show the golden line of resin around the edge of the solder of the cap, the same as seen on the seam on the side of the can. All others are sealed with muriatic acid. Reject every one that shows any rust around the cap on the inside of the head of the can. Rust proves that there was air inside, and consequently fermentation; also any can that does not bear the manufacturer's name. Before buying press the bottom of the can up, and if the contents are decomposed, the tin will rattle like the bottom of the oiler of your sewing machine. If the contents are sound the bottom will be solid and impossible to push up."

Take a new flower-pot, wash it clean, wrap in a wet cloth, and set over butter it will keep it as hard as if on ice. Milk, if put into an earthen can, or even a tin one, will keep sweet for a long time if well wrapped in a wet cloth.

GOOD PASTE ALWAYS READY.—Dissolve half a teaspoonful of alum in a pint of hot water; when cold stir in flour enough to make it about as thick as rich cream; stir in as much powdered rosin as will lie on a cent. Put a saucepan on the stove, put a teacupful of boiling water in it, then stir in the mixture; stir it constantly to keep it from burning. When it is about as thick as mush take it from the fire, put

it in a jar or glass can, and set it where it will be cool. It will become hard, and when needed for use take out a little and soften it with warm water.

Pleasant rainy-day work for the older children is to be found in the making of a scrap-book of the portraits of noted men and women; the portraits to be obtained from publishers' catalogues, magazines, newspapers, and other available sources.

Remove tar from the hands by rubbing with the outside of fresh orange or lemon peel, and drying immediately. The volatile oil dissolves the tar so that it can be rubbed off.

Soiled wall-paper is improved by rubbing with a clean flannel cloth dipped in fine oatmeal.

An excellent mixture to remove spots of grease, from boys' and men's clothing particularly, can be made of four parts of alcohol to one of ammonia. Apply the liquid to the grease-spot, and then rub diligently with a sponge and clear water.

Scorches made by overheated flat-irons can be removed from linen by spreading over the cloth a paste made of the juice pressed from two onions, one-half ounce white soap, two ounces fuller's earth, and one-half pint of vinegar. Mix, boil well, and cool before using.

When color on a fabric has been destroyed by acid, ammonia is applied to neutralize the acid, after which an application of chloroform will in almost all cases restore the original color. The application of ammonia is common, but that of chloroform is little known.

Ink-stains may be removed from books by wetting the spot with a solution of oxalic acid, 1 oz., and water one-half pint.

Never put pickles in a jar that has had lard in it.

When cockroaches get into smooth bowls half filled with molasses and water, they can not get out.

When an iron poker becomes soft by long usage, it can be hardened by heating to redness and plunging several times in a pail of cold water.

Never soak mackerel or other salt fish with the skin-side down; the salt will fall to the skin and remain. Put the flesh-side down and soak it, as salt falls to the bottom.

To protect steelware from rust: If all steel or tinware is well rubbed with lard and then with common unslacked lime before being put away, it will

never rust. This is also the best plan to remove rust.

Sponges which are to be used in the bath room may be softened by boiling for a few minutes in three waters. After each time of boiling rinse in cold water, and put on the stove again in a pan of cold water.

Glue delicate and nice for mounting ferns and sea-weeds is made of five parts gum arabic, three of white sugar, two of starch; add a very little water, and boil until thick and white.

"The finest calf ever raised on my father's farm was fed the entire summer on buttermilk, and in the fall sold for four times the value of ordinary calves of his age. The next time you churn give the buttermilk to the calves, but not to the farm-boys. They know what it is good for."

In dealing with furniture, remember to keep water away from everything soluble therein, oil from everything porous, alcohol from varnish, and acids from marble.

To take ink-spots out of mahogany, touch with a feather dipped in a teaspoonful of water to which a few drops of spirits of nitre have been added, and rub quickly with a wet cloth.

If oil is spilled on a carpet and you immediately scatter cornmeal over it, the oil will be absorbed by it. Oil may also be removed from carpets upon which you dare not put ether or ammonia, by laying a thick blotting paper over it, and pressing a hot flat-iron on it. Repeat the operation several times, using a clean paper each time.

Handy way of making glue: Break best glue into small pieces, just cover with strong vinegar or dilute acetic acid, let it soak a few hours, and heat till it boils. In cold weather it will become a jelly when cold; in summer it will remain fluid. For use, warm till fluid enough; there is no need to boil it.

Put a teaspoonful of brown sugar into a quart of paste, and it will fasten labels as securely to tin cans as to wood. House-keepers may save themselves much annoyance in the loss of labels from their fruit-cans when putting up their own fruit, by remembering this.

The best rubber cement is "marine glue." A cheaper one, highly recommended, is made by cutting a quantity of pure India-rubber in its natural state into small pieces, putting them in a wide-mouthed bottle, and filling it about half full of the purest benzene, the rubber will swell almost immediate-

ly, and if well shaken will in a few days assume the consistency of honey. If the rubber does not dissolve, add more benzene; if when dissolved the cement is too thin, add more gum. A piece of rubber one inch in diameter will make a pint of cement. This dries in a few minutes and is very useful in uniting pieces of leather, as it is both elastic and durable.

To mark tools: Coat them over with a thin layer of wax or hard tallow, by first warming the steel and rubbing on the wax until it flows, and let it cool. When hard mark the name through the wax with a graver or any sharp-pointed instrument, and apply nitric acid. After a few moments wash off the acid and wipe it with a soft rag, when the letters will be etched into the steel.

Plant-lice of all kinds and many other insects can be destroyed by the kerosene emulsion, or mixture of kerosene and soap. It can be prepared by taking soft soap one quart, or hard brown soap, or what is still better whale-oil soap, one-fourth pound, two quarts hot water, and one pint kerosene. Stir till all are permanently mixed. Then to one part of this mixture add fifteen parts of water. A force-pump is the best instrument to apply it with, as a powerful stream sends it into cracks and seams not otherwise reached.

To cure a felon: Take salt and pulverize it fine as flour, wet it with spirits of turpentine sufficient to make a paste, apply this to the part affected, then take a strip of common muslin, begin at the end of the finger, and wrap it tight enough to force the blood out of the finger affected. Then keep it well saturated with spirits of turpentine for six hours, take off the bandage, and your felon is cured. "I have never known a failure where the above remedy was applied before suppuration had commenced, and even after that stage, if the patient has nerve enough to endure the operation, it will arrest the disease."

To test silk: Take ten fibers of the filling in any silk, and if on breaking they show a feathery, dry, and lack-luster condition, discoloring the fingers in handling, you may at once be sure of the presence of dye and artificial weighting. Or take a small portion of the fibers between the thumb and forefinger and very gently roll them over and over, and you will soon detect the gum, mineral, soap, and other ingredients of the one, and the absence of them in the

other. A simple but effective test of purity is to burn a small quantity of the fibers. Pure silk will instantly crisp, leaving only a pure charcoal; heavily dyed silk will smoulder, leaving a yellow, greasy ash. If on the contrary you can not break the ten strands, and they are of a natural luster and brilliancy, and fail to discolor the fingers at the point of contact, you may be well assured that you have a pure silk, honest in its make and durable in its wear.

Hymns, the Twelve Best.—According to good judges, the dozen best hymns in the English language are Lyte's evening hymn, "Abide with me," Heber's "From Greenland's icy mountains," Gilmore's "He leadeh mc," Keith's "How firm a foundation," Miss Elliot's "Just as I am," Newman's "Lead, kindly light," Stennett's "Majestic sweetness sits enthroned," Smith's "My country, 'tis of thee," Palmer's "My faith looks up to thee," Toplady's "Rock of Ages," and Watts's "When I survey the wondrous cross."

Hypnotism.—In order to produce hypnotic sleep, the fixing of the eyes upon a brass ball or other bright object, according to Braid's method, is no longer considered necessary. Simply place the patient in an arm chair, in a quiet, slightly darkened room; tell him not to resist the influence of sleep, and then repeat a dozen or more times some such phrases as "Now you are going to sleep; you are breathing slowly; your eyes are closing; you are almost asleep," etc., in a low, monotonous tone of voice. If the patient is hypnotized, a cataleptic state will be manifested when the arms are raised. Now the desired cure is suggested, and after a few moments the patient is awakened by simply telling him to awake.

Idaho was admitted the 43d State in the American Union July 3, 1890. It has 85,290 square miles and 84,229 population. In 1880 it had 32,610 people, and an improved acreage of 197,407. Its capital remains at Boise City.

Illiterates.—According to recent statistics the three Slavic States, Roumania, Servia, and Russia, head the list of illiterates with about 80 per cent of their population unable to read and write. Of Latin races Spain leads with 63 per cent, followed by Italy with 48, and France and Belgium about 15. Illiterates in Hungary are under 43 per

cent. Austria 39, Ireland 21, England 13, Holland 10, United States (white population) 8, Scotland 7. Teutonic races are the best favored in this regard, Switzerland having but 2½ per cent, and Germany as an empire 1, while in Sweden, Denmark, Bavaria, Baden, and Wurtemberg practically no one can not read and write.

"Immortals," the Forty American.—In 1884 *The Critic*, a New York literary journal, took a vote of its intelligent and large body of readers, which resulted in the choice of forty eminent scholars and writers, held worthy to constitute "a possible American Academy, formed on the same general principle as the famous French literary institution." The list is now as follows: O. W. Holmes, J. R. Lowell, J. G. Whittier, Geo. Bancroft, W. D. Howells, G. W. Curtis, T. B. Aldrich, F. Bret Harte, E. C. Stedman, E. E. Hale, G. W. Cable, Henry James, S. L. Clemens ("Mark Twain"), C. D. Warner, R. H. Stoddard, W. D. Whitney, Walt Whitman, Noah Porter, John Fiske, Julian Hawthorne, John Burroughs, T. W. Higginson, O. B. Frothingham, Geo. P. Fisher, M. C. Tyler, C. A. Dana, D. G. Mitchell ("Ik Marvel"), A. Winchell, G. P. Lathrop, W. W. Story, F. Parkman, R. W. Gilder, Phillips Brooks, C. E. Norton, F. J. Child, F. R. Stockton, H. C. Lea, A. D. White, H. H. Furness, Joel C. Harris ("Uncle Remus"). The last nine take the place of R. G. White, H. W. Beecher, Jas. F. Clarke, Asa Gray, T. D. Woolsey, A. Bronson Alcott, Mark Hopkins, John G. Saxe, and E. P. Whipple, deceased.

Immortelles, the Twenty American.—Another and very recent vote by the readers of *The Critic* designates the following as the twenty Immortelles, or foremost living women in American literature. They are named in the order of largest votes: Mrs. Stowe, Mrs. Burnett, Miss Murfree, Mrs. Howe, Mrs. Ward (Elizabeth Stuart Phelps), Miss Jewett, Mary Mapes Dodge, Miss Woolson, Edith M. Thomas, Margaret Deland, Adeline D. T. Whitney, Celia Thaxter, Amelia E. Barr, Lucy Larcom, Mrs. Cooke (Rose Terry), Miss Dodge ("Gail Hamilton"), Mrs. Spofford (Harriet Prescott), Louise Chandler Moulton, Mary E. Wilkins, Mrs. Teufel (Blanche Willis Howard). The twenty next in favor are Mary Hall-ock Foote, Margaret J. Preston, Miss

Woolsey ("Susan Coolidge"), Louise Imogene Guiney, Margaret E. Sangster, Martha J. Lamb, Rebecca Harding Davis, Miss French ("Octave Thanet"), Mrs. Terhune ("Marion Harland"), Miss Willard, Harriet W. Preston, Mrs. M. A. Livermore, Agnes E. Reppier, M. G. Van Rensselaer, Kate Field, Frances Fisher ("Christian Reid"), Helen Gray Cone, S. M. B. Piatt, Mrs. Custer, Elizabeth B. Stoddard.

Indian Territory.—The last report of the Indian Agent here gives the Cherokee population as 25,000, Creeks 15,000, Choctaws 13,000, Chickasaws 6400, Seminoles 2600—about 62,000 in all. About 19,000 are full-blood, 33,000 mixed, and 15,000 intermarried with whites and negroes. They occupy about 20,000,000 acres, or 30,102½ square miles.

Insanity, Alcoholic.—A specially interesting feature of the last annual report of the Eastern Asylum for the Insane, at Pontiac, Mich., relates to cases of insanity induced by alcoholic excess, which seem to be numerous there. The Medical Director, Dr. Burr, classifies delusions arising from it as follow: Of suspicion, apprehension, persecution, conspiracy, poison, 200 cases; sexual, 5; of unseen agency, electricity, mesmerism, etc., 26; religious, 29; of extravagance, 53; of personal identity, 3; of others' identity, 53; visceral illusions, 11; imperative conceptions, 3; suicidal attempts 24, threats 26; homicidal attempts 15, threats 35, murder 1; hallucinations of hearing 65, seeing 25, smell 3. The Director adds: "Contrary to the experience of German writers, it would appear from this tabulation that hallucinations of hearing are far in excess of those of the other special senses, more than double the number suffering from these hallucinations, than from those of sight. It is probable that in many of these cases hallucinations were originally the basis of the subsequent delusions."

Insects.—A piece of gum camphor as large as a hazel-nut for an ordinary room, if burnt in it with doors and windows closed, will effectually kill every insect. Put the camphor in an iron kettle, and this into another iron kettle, as it burns very fiercely. Let the smoke remain in the room for about half an hour; then open the windows wide, and let them remain so the rest

of the day. A clear, windy day should be chosen.

Interest.—A short way of calculating interest is to multiply the principal by as many hundredths as there are days, and divide by 90 for 4%, by 72 for 5%, 60 for 6, 52 for 7, 45 for 8, 40 for 9, 36 for 10, and 30 for 12.

Internal Revenue Taxes.—See Appendix.

Inventions.—In a multitude of remarkable tokens of mechanical progress during about the last half-century, the following are the more important: Ocean steamships, railways, street tramways, telegraph lines, ocean cables, telephone, phonograph, photography and a score of new methods of picture-making, aniline colors, kerosene oil, electric lights, steam fire-engines, chemical fire-extinguishers, anæsthetics and painless surgery, gun-cotton, nitroglycerine, dynamite, and a host of other explosives; aluminium, magnesium, and other new metals; electroplating, spectrum analysis, and the spectroscope; audiphone, pneumatic tubes, electric motors, electric railways, electric bells, type-writers, cheap postal system, steam heating, hydraulic elevators, vestibule cars, cantilever bridges.

Japan has now an estimated population of 40,000,000.

Jews in New York City number 90,000, and have 49 synagogues. They form an influential element, many of them being bankers, merchants, editors, and politicians. Although comprising 10 per cent of the population, they contribute less than 1 per cent to the criminal classes.

Justices' Robes.—The robe of the Chief Justice of the United States Supreme Court is black Chinese satin; the other justices wear black silk, all made alike. One woman has made these robes for forty years, and gets \$100 apiece.

Kermess (otherwise spelt kermis, kirmess, and kirmes), is the recent importation of a popular Flemish entertainment, and is now the fashionable method of a charity festival in this country. The word originally meant church-mass in several European languages, and was appropriated first to the feast of dedication of a church, then to an annual fair or market, and finally, in the Low Countries and French Flanders, to a yearly town festival, often held on

the feast-day of the patron-saint of the place or of its principal church, and characterized by many rude sports, which at one period degenerated into licentious extravagances. [See also "Pardon."]

King's Daughters.—This society was formed in New York City in January, 1886, at first on the Rev. E. E. Hale's plan of tens; but local clubs now consist of any desired number of members. Its object is to promote association of women in small bands for devotional and charitable purposes. Members wear a small silver Maltese cross, marked "I. H. N." (initials of the society's motto, "In His Name"), and the date 1886. It has a remarkable growth and success. Headquarters, No. 47 West Twenty-second st., New York City. A similar society of King's Sons has been organized.

Labor Day was first officially proclaimed by Gov. Humphrey, of Kansas, for Sept. 1, 1890, which thus became a legal holiday in that State.

Lamp-chimney.—One in Americus, Ga., has been used daily for eight years, having been boiled in salt and water when bought, and no amount of flame has since sufficed to break it.

Leap-year, why 1900 will not be a.—The year is 365 days, 5 hours, 49 minutes long; 11 minutes are taken every year to make the year 365½ days long, and every fourth year we have an extra day. This was Julius Cæsar's arrangement. Where do these eleven minutes come from? They come from the future, and are paid by omitting a leap-year every 100 years. But if a leap-year is omitted regularly every hundredth year, in the course of four hundred years it is found that the eleven minutes taken each year will not only have been paid back, but that a whole day will have been taken up. So Pope Gregory XIII., who improved Cæsar's calendar in 1582, decreed that every centurial year divisible by four should be a leap-year after all. So we borrow eleven minutes each year more than paying our borrowings back by omitting three years in three centurial years, and square matters by having a leap-year in the fourth centurial year. Pope Gregory's arrangement is so exact, and the borrowing and paying back balance so nicely, that we borrow more than we pay back to the extent of only one day in 3866 years.

Liability.—The responsibility of physicians in the treatment of patients has been fixed by the courts as follows: A physician treating a patient in good faith, to the best of his ability, is not criminally responsible for the patient's death, although caused by medicine administered by him, but a person ignorant of the uses and properties of a poisonous drug is criminally liable for the negligent use thereof. In the case of a dentist or surgeon using an anæsthetic, it is held that he is not bound to look for any but the probable and natural effects of the drug, and is not liable for results arising from the peculiar temperament or condition of the patient, of which he had no knowledge; although if this were discoverable upon such an examination of the patient as reasonable skill and diligence require, the dentist or surgeon would be responsible for negligently failing to inform himself.

Lincoln-ave. M. E. Church, Lincoln and Putnam aves., Detroit, org. 1885, built an \$1800 chapel with 200 sittings,

and added the main building summer of 1888, the whole having a capacity of 500, and worth about \$12,000. It has had healthy growth from the first, and now numbers 233 full members



REV. L. P. DAVIS.

and ten probationers. Sunday services, class at 10, preaching 10:30 and 7:30, S. S. at noon, Epworth League devotional meeting 6:30; general prayer-meeting Wednesday eve. Public always invited. Rev. L. P. Davis, D. D., b. Dec. 31, 1839, in Ray township, Macomb Co., Mich., was graduated from the Northwestern University with class of '73, entered ministry and joined Detroit Conference Sept., '73, and took Lincoln-av. pastorate Sept., '87. He was made D. D. May, 1890. Residence, 291 W. Hancock ave.; telephone 4405-3R.; receives Friday afternoons.

Life, Expectation of.—After the first year of human life, chances of living

increase slowly to the fourth year, then slowly decline. Farm-laborers have an average expectation of 45.32 years of life; Carpenters, 45.28; Domestic, 42.03; Bakers, 41.92; Shoemakers, 40.87; Weavers, 41.92; Tailors, 39.40; Hatters, 38.91; Stone-masons, 38.19; Plumbers, 38.18; Mill-operatives, 38.09; Blacksmiths, 37.96; Bricklayers, 37.70; Printers, 36.66; Clerks, 34.99; average of population, 39.88. A remarkable case of longevity was brought to general notice by the death, Sept. 13, 1890, of Bridget Doty, of Mineral Point, Wis. She is known to have been born in Ireland in 1770, and hence was 120 years old.

Lightning, Annual Deaths from.—In England, something less than 1 in 1,000,000 of population; France, not quite 2; Prussia, nearly 4; Russia and Switzerland, over 5. Of those thus killed in England 81 per cent are males, only 19 per cent are women.

Locomotives cost about \$12,000 each in England, in this country \$7000 to \$8000. But the English engine is not considered one-half better than the American.

Losses in Battle.—In eight battles to Waterloo, Prussia lost in killed and wounded 18.42 per cent of all engaged, and 3.86 at the battle of Koniggratz. Austria in seven to Waterloo lost 11.17, and 8.56 in two afterwards; France 22.38 in nine to Waterloo, and 8.86 in nine subsequently; England in four battles, 10.36. In the war of the Rebellion, eleven battles, the Federals lost 12.89, and the Confederates 14.16. Thus, excepting only the troops of Frederick and Napoleon, the American soldier proves capable of sustaining the heaviest loss on battle-fields; and the excess of German and French loss is believed to be due rather to the persistent tactics of their great leaders than to the discipline of the troops. In the entire Rebellion the Union loss was 4.7 per cent and Confederate 9, against 3.2 by the Allies in the Crimean war, 3.1 by the Germans in the Franco-Prussian war, and 2.6 by Austria in the war of 1866. The Fifth New Hampshire Infantry relatively leads the Union losses with 295 killed or mortally wounded; the 83d Pennsylvania is next, with 282; and the 7th Wisconsin third, with 281. Forty-five regiments out of 2000 lost over 200. In the larger formations the First Maine Heavy Artillery lost 423 in ten months; the 8th New

York H. A. 331 in about the same time. From the 11th Ohio Battery 6 men were killed at Iuka. At Gettysburg the First Minnesota Infantry lost 229, or over 28 per cent, the highest percentage of the war, though of killed wounded, and missing a percentage of 42 was reached by Hancock's Division at Fredericksburg. At Gettysburg the officers lost 27 per cent in killed and wounded, enlisted men 21; at Shiloh 21 and 17. In general 1 officer was killed for every 16 men; 1 to 72 died of disease, and of colored troops 1 to 215.

Marble.—Extensive quarries of verd antique marble, said to surpass in brightness and variety of color the famous Italian, Greek, and Russian marbles, have been found near the Felch Mountains, in the Upper Peninsula. Its foundation color is green, as the name indicates, but variegated with many other colors beautifully interblended. There is no finer material anywhere for columns, pilasters, pedestals, wainscots, mouldings, mantels, and other details of house decoration.

Mariners' Church, Woodward ave. and Woodbridge st., Detroit, is the oldest stone building in the city, built

1849, on site of homestead of Mrs. Col. Anderson and Miss Taylor, who left their entire estate to found a free people's church, but especially for sailors. Rents from part of building help support the church and swell the fund for added



REV. PAUL ZIEGLER.

buildings proposed on Griswold st.; sitings, 400. Services Sunday morning and evening, Wednesday evening, all holy days, and every day in Lent. While navigation is closed a penny reading room is open afternoons, and daily evening prayer offered at 5 p. m. Membership, 75; value of property \$50,000. The Rev. Paul Ziegler, Rector, was born in Detroit Dec., 1847, or dated 1874, and took charge of this church 1885, and serves also as Principal of Detroit Church Academy. Residence, 103 W. High st.; may be seen except forenoons of school-days.

Mars.—Careful observations of this planet, and the discovery of an apparently elaborate system of artificial canals, add to the reasonably certain conclusion that this planet is inhabited. See Appleton's Annual Cyclopædia for 1888, page 513.

Mary W. Palmer Memorial M. E. Church, McDougall ave. and Champlain sts., Detroit, successor of Jefferson-ave. M. E.

Church, was dedicated Nov. 11, 1881. Sitings 450. With a possible 300 more. Property \$46,000, largely the gift of Mrs. T. W. Palmer, for whose mother it is named. Membership, 50, including his mission at



REV. W. H. SHIER.

aldwin ave. and Champlain; Sunday-schools, 500. Sunday services 10:30 and 7:30; prayer service, 7:30 Wednesday; Epworth League, Friday 7:30. Seats free; expenses met by voluntary contributions. Rev. W. H. Shier, minister in charge, was born in Paterson, N. J., June 25, 1832, entered the ministry Oct. 1, 1861, has had most of the first-class charges of the Detroit Conference, and came to his church Sept., 1889. Resides at parsonage, study in church; receives the general public 8 to 12 Tuesdays.

Medicines, Alcoholic.—According to official reports based upon scientific analyses by the Analyst of the Massachusetts State Board of Health and the assayer of Rhode Island, the percentages of alcohol in some popular medicines are as follow: Walker's Vinegar Bitters, much vaunted as a temperance remedy, 6 per cent; Wheat Bitters, 13; Reed & Carnrick's liquid peptonoids, 5; Meusman's Peptonized Beef Tonic, 6; California Wine, 18; Brown's Iron Bitters, 19; Leibig Co.'s Coca Beef Tonic, 23; Hooftland German Bitters and Burdock's Blood Bitters, 25; Colton's Nervine, 27; Drake's Plantation Bitters, 30; Warner's Safe Tonic, 35; Mishler's Herb Bitters, 36; Hostetter's Bitters, 43; Paregoric, about 50; Jamaica Ginger, 30. Murdock's Liquid Food is about one third whisky; Mrs. Winslow's

Soothing Syrup has enough alcohol to produce a flame if heated in a retort. Some remedies for children contain opium at well as alcohol.

Memorial Presbyterian Church, Campau Park, Detroit, was organized Jan. 11, 1881. Its chapel, however, was dedicated Dec., 1880; sermon by the late Rev. Dr. Wm. Hogarth; and the main structure was consecrated Dec. 17, 1882. Sittings, 500. chapel as many, classroom included. Total property, with church equipment, \$40,000.



REV. D. M. COOPER.

Three persons (Leonard Laurence \$6000, Mrs. A. L. Sprague \$1000, Mrs. V. K. Moore \$1000) gave \$8,000, and the pastor, Rev. Mr. Cooper, \$25,600, besides considerable sums since, and he also plans the gift of a parsonage. Membership, 275; average attendance Sunday-school, 400. Sunday services 10:30 and 7:30; Sunday-school, 2:30; regular prayer-meeting Wednesday evening; young people's Friday evening. Rev. D. M. Cooper is a native of Detroit, born April 18, 1827, graduated at Michigan University 1849, and studied also at Princeton Theol. Sem., entered the ministry 1851, was pastor at Saginaw, Grand Haven, and Albion, began in Detroit in 1879 with Clinton-avenue mission, out of which grew Memorial church. He was installed its pastor Nov. 21, 1883. Residence, 501 Jefferson ave.

Memories, Great.—It is said that Pascal never forgot anything he had seen, heard, or thought, Avicenna repeated by rote the entire Koran when he was ten years old, Francis Suarez had the whole of St. Augustine's works in his memory—enough, one would think, to destroy all his mental power of digestion; Julius Lipsius once offered to repeat the entire history of Tacitus without a mistake, on forfeit of his life. In our own day Jedediah Buxton and Zerah Colburn had a prodigious power and rapidity of calculating in their minds. Colburn could tell the

number of seconds in 58 years almost before the question could be repeated. Buxton was once taken to the theatre to see Garrick, and was observed to pay unremitted attention to the great actor. When he went out a friend asked him how he had been impressed by the acting, and Jedediah answered by giving the number of words and syllables Garrick had spoken. His mind had been interested solely in this enumeration. Scaliger committed the whole of the Iliad and Odyssey in three weeks.

Michigan, by the deficient census of 1890, has a population of 2,089,792, having in the decade since the Tenth Census advanced 452,855, or 27.66 per cent. It has passed Kentucky in the race, but has itself been passed by Texas; so that it retains its former place as eleventh of the States in order of size. By the last report of the Superintendent of Public Instruction, the State had 403,604 children in the schools, and a teaching force of 15,074 teachers, to whom \$3,190,574.85 were paid. The mineral product of Michigan for 1889 was: Iron ore, 5,829,828 long tons; pig iron, 198,745 tons; copper, 43,613 tons; land plaster, 19,823 tons; stucco, 206,380 bbls.; salt, 5,950,000 bbls., at an average price of 54.3 cents per bbl.; coal, 58,099 tons. The specific taxes from iron mines in 1889 amounted to \$58,296.28; from copper mines, \$32,708.80. [For State Government, census returns, etc., see Appendix.]

Michigan has high repute for its State University, its fine system of public schools, and low percentage of illiteracy (only 4 per cent by the last census), the beauty and superior character of its cities and many of its towns for most purposes of pleasant residence, and for the richness of its material resources. By the census of 1880 it was first among the States for iron, copper, salt, and lumber; second, for total value of non-precious metals produced; third, for wool; fourth, for wheat, buckwheat, potatoes, hops, and sheep; fifth, for power employed in manufacturing; sixth, for butter and average daily attendance upon the public schools; seventh, for number of manufacturing and of dwellings, value of farms and their equipment, and persons engaged in material industries; and eighth for school-houses and pupils in public schools, males of voting age, farm products, and capital in-

vested in manufactures. Returns from the census of 1890 may change some of these relative statements, but not importantly.

The railroads of Michigan which maintain some sort of corporate existence, including logging or lumber roads, number about 75; but for purposes of operation the passenger roads are grouped under about one-third as many titles, heads, or systems, pretty nearly as given below. Mileage is generally given as in the State Railroad Commissioner's Report for 1889, and leading officers as in the Travellers' Official Guide for November, 1890.

Chicago & Grand Trunk Railway, from Port Huron to Chicago, 335 miles, in Michigan 224. Jos. Hickson, Montreal, President; W. J. Spicer, Gen'l Manager, Detroit; Jas. H. Muir, Treasurer, Det.; A. B. Atwater, Sup't, Det.; Geo. B. Reeve, Traffic Manager, Chicago; W. E. Davis, Gen'l Passenger Agent, Chicago. The Grand Trunk system also operates the Detroit, Grand Haven, & Milwaukee R. R., Detroit to Grand Haven, 189 miles; the Michigan Air-line Division, Lenox to Jackson, 106; Toledo, Saginaw, & Muskegon (Ashley to Muskegon), 96; Detroit to Fort Gratiot, 60.7; and has recently acquired the Cincinnati, Saginaw, & Mackinaw, West Bay City to Durand, 53.

Chicago, Kalamazoo, & Saginaw, Kalamazoo to Hastings, 30½ miles. Fred'k Bush, Kal., Pres. and Gen. Manager; H. C. Potter, Sec'y, etc., Kal.

Chicago & Northwestern. This great system has a total mileage of 4250, of which 381¼ are in Michigan—Menominee to Michigamme, Powers to Watersmeet, Florence to Crystal Falls, and Narenta to Metropolitan, all in the Upper Peninsula. Marvin Hughitt, Pres.; John M. Whitman, Gen. Man.; M. L. Sykes, Sec'y and Treas.; W. A. Thrall, Gen. Pass. Agt.; H. R. McCullough, Gen. Frt. Agt., all Chicago.

Chicago & West Michigan, 206¾ miles, 174¼ miles in Michigan, from Indiana line to Big Rapids, with short branches. Nath'l Thayer, Pres., Boston; Charles M. Heald, Gen. Man., Grand Rapids; George De Haven, Gen. Pass. Agt., Grand Rapids.

Cincinnati, Jackson & Mackinaw, Toledo to Allegan, 156 miles. Walston H. Brown, Receiver, New York; F. B. Drake, Gen. Mgr.; J. B. Flanders, Supt.; T. C. M. Schindler, Gen. Frt. and Pass. Agent, all of Toledo.

Cincinnati, Wabash, & Michigan, Anderson, Ind., to Benton Harbor, 33½ miles in Michigan. D. J. Mackey, Pres., Evansville, Ind.; Norman Beckley, Gen. Man., Elkhart, Ind.; O. W. Lamport, Supt., Wabash, Ind.; Edgar H. Beckley, Gen. Pass. Agt., Elkhart; Darwin F. Coe, Gen. Frt. Agt., Elkhart.

Detroit, Bay City, and Alpena, Alger to Alpena, 105 miles, with 26 in branches. R. A. Alger, Pres., Detroit; Milo Eastman, Gen'l Supt., East Tawas.

Detroit, Lansing, & Northern, Detroit to Howard City, 156.6 miles; Stanton Junction to Big Rapids, 63.3; Grand Ledge to Grand Rapids, 53; Alma to Howard City, 42¼; and short branches. N. Thayer, Pres., Boston; Chas. Merriam, Sec. and Treas., Boston; Geo. DeHaven, Gen. Pass. Agt., Grand Rapids.

Duluth, South Shore & Atlantic, St. Ignace to Houghton, 345 miles, with branches Nestoria to Bessemer 93, and Soo Junction to Sault Ste. Marie 47. Sam'l Thomas, Pres., L. M. Schwan, Sec'y, W. A. C. Ewen, Treas., all N. Y.; W. F. Fitch, Gen. Mgr., D. L. Philbrin, Supt., Wm. Orr, Gen. Frt. Agt., all Marquette; C. B. Hibbard, Gen. Pass. Agt., Minneapolis.

Flint & Pere Marquette, Monroe to Ludington, 239½ miles, and 100 in branches. W. W. Crapo, Pres., New Bedford, Mass.; D. Edwards, Asst. Gen. Manager; H. C. Potter, Jr., Sec'y and Treas., Sanford Keeler, Supt., A. Patriarche, Gen. Frt. Agt., all East Saginaw.

Grand Rapids & Indiana, Ft. Wayne, Ind., to Mackinaw, 366½ miles, in Michigan 313½, branches 42½. W. O. Hughart, Pres. and Gen. Mgr.; W. R. Shelby, Vice-Pres. and Treas.; E. C. Leavenworth, Gen. Frt. Agt.; C. L. Lockwood, Gen. Pass. Agt., all Grand Rapids.

Lake Shore & Michigan Southern (total mileage 1400½), Chicago to Buffalo, in Michigan 570 miles, including Detroit, Monroe, & Toledo R. R., Detroit & Chicago R. R. (Fayette Branch), Detroit, Hillsdale, & Southwestern, Kalamazoo, Allegan, & Grand Rapids, Kalamazoo & White Pigeon, Northern Central Michigan (Jonesville to North Lansing), and Fort Wayne & Jackson. W. K. Vanderbilt, Ch'n of Board of Directors, New York; John Newell, Pres. and Gen. Mgr., Cleveland, O.; E. D. Worcester, Vice-Pres., Sec'y and Treas., N. Y.; P. P. Wright, Gen'l Supt., Cleveland; S. S. Hand, Supt. Toledo and other branches, Detroit; C. P. Leland, Auditor, Cleveland; A. J. Smith, Gen. Pass. Agt., Cleveland; J. T. R. McKay, Gen. Frt. Agt., Cleveland.

Manistee & Northeastern, Manistee to Interlochen, 45 miles. Edw. Buckley, Pres. and Gen. Mgr.; Wm. Douglas, Gen. Supt., both Manistee.

Michigan Central; mileage of present system, 1554.37; in Michigan, 1049.3, including main line, Jackson, Lansing, & Saginaw R. R. (with Mackinaw Division), Detroit & Bay City, Michigan Air-line (Jackson to Niles), Grand River Valley (Jackson to Grand Rapids), Toledo & Detroit, Kalamazoo & South Haven, Michigan Midland (Lenox to St. Clair), Saginaw Bay & Northwestern (Pinconning to Gladwin), South Bend Division (from Niles), Battle Creek Division (to Findlay), etc. C. Vanderbilt, Ch'n of Board, New York; H. B. Ledyard, Pres. and Gen. Mgr., Detroit; E. D. Worcester, Vice-Pres. and Sec'y, N. Y.; Henry Pratt, Treas., N. Y.; D. A. Waterman, Auditor, Detroit; Rob't Miller, Gen. Supt., Det.; O. W. Ruggles, Gen. Pass. Agt., Chicago; A. Mackay, Gen. Frt. Agt., Chicago.

Milwaukee & Northern, Milwaukee to Champion, 253 miles; in Michigan, branches Sidnaw to Ontonagon 46, and Menominee to Ellis Junction 22. A. J. Earling, Gen. Mgr., Chicago; W. G. Collins, Gen. Supt., Geo. H. Hartford, Gen. Pass. Agt., J. J. Coleman, Gen. Frt. Agt., all Milwaukee.

Mineral Range and Hancock & Calumet R. R.'s; Houghton to Red Jacket, 15 miles, and H. to Lake Linden, 11.2. Chas. Ford, Pres., New York; John Tully, Sec. and Treas., C. A. Wright, Gen. Mgr., Hancock.

Minneapolis, St. Paul, & Sault Ste. Marie, 794½ miles, 192 in Michigan, Wisconsin line to Sault. F. N. Finney, Pres.; W. L. Martin, Sec. and Treas.; F. D. Underwood, Gen. Mgr.; H. L. Shute, Traffic Mgr.; C. B. Hibbard, Gen. Pass. Agt.,—all Minneapolis.

Pontiac, Oxford, & Northern, Pontiac to Caseville, 100 miles. Geo. W. Debevoise, Pres., N. Y.; Jas. Houston, Gen. Supt., Pontiac.

Saginaw, Tuscola & Huron, East Saginaw to Bad Axe, 67 miles. W. L. Webber, Pres.; E. T. Judd, Treas.; M. V. Meredith, Supt., all East Saginaw.

Toledo & South Haven, Lawton to South Haven, 36.6 miles. Lucius Clark, Pres., South Bend; John Ihling, Supt., Lawton.

Toledo, Ann Arbor, & North Michigan, Toledo to Frankfort, 299 miles (at present to Copemish 275), and branches 11. J. M. Ashley, Pres.; H. W. Ashley, Gen. Mgr.,—both Toledo; J. B. Connors, Supt., Owosso; A. J. Paisley, Gen. Pass. Agt.; W. H. Bennett, Gen. Frt. Agt., Toledo.

Wabash Western, Detroit to Clymer's, Ind., 335.3 miles, in Michigan 79. O. D. Ashley, Pres., N. Y.; Chas. M. Hays, Gen. Mgr., St. Louis, Mo.; J. C. Otteson, Sec., N. Y.; F. L. O'Leary, Treas., St. Louis.

There are also the Au Sable & Northwestern, Au Sable to Potts, 37 miles; the Frankfort & South-eastern, Frankfort to Copemish, 25; short sections in the Upper Peninsula of the Green Bay, Wenona, & St. Paul, and the Wisconsin Central; the Lowell & Hastings, Lowell to Logan, 12; St. Joseph Valley, Buchanan to Berrien Springs, 11; the Mason & Oceana, Buttersville to Stetson; and a number of logging roads that carry passengers.

The State institutions not illustrated and annotated in the Calendar of this issue of the Year-book, are the State Agricultural College, Rev. Oscar Clute, President, established near Lansing in 1855; the Michigan Mining School, founded at Houghton in 1885, M. E. Wadsworth, Director; the Michigan School for the Blind, located at Lansing, 1879, George Barnes, Superintendent; the Northern Michigan Asylum, Traverse City, opened Nov. 30, 1885, Dr. James D. Munson, Medical Superintendent; Reform School, Lansing, 1885, C. Gower, Supt.; and the Detroit House of Correction, a city institution, but used also by the State for the custody of female prisoners.

The colleges of Michigan, except those named above, are the State University with its attached professional and technical schools, Ann Arbor; the State Normal School, Ypsilanti; Detroit College, Catholic; Albion College, Methodist Episcopal; Adrian College, Methodist Protestant; Kalamazoo College, Baptist; Hillsdale College, Free-will Baptist; Hope College, Holland, Reformed; Alma College, Presbyterian; Battle Creek College, Seventh-day Adventist; and Olivet College, Congregational.

By the last report of the Secretary of State, the whole number of farms in the State is 138,190; acres of improved land, 7,979,608; unimproved land in farms, 4,583,129; average size of farms, 90.83 acres. The area of improved land is 114,440 acres, and average size of farms one-fifth of an acre, greater than in 1889.

Michigan Press Association was formed and first meeting was held at Jackson, Jan. 23, 1868. 26 newspaper men present.

E. B. Pond of the Ann Arbor Argus was first President, and Jas. O'Donnell of the Jackson Citizen first Secretary. Meetings were held regularly thereafter each year until 1877, when the Executive Committee for some unexplained cause failed to call the body together, as required by the constitution, and after this no meeting was held until September, 1878, when an informal one was called at Detroit, and the next took place at Lansing, Jan. 7, 1879. This was followed by another meeting, a very enthusiastic and well-attended one, at Ann Arbor, in the year following. The next, 16th annual meeting, was called for Detroit the following spring, but unfortunately the date was set near the spring election, and scarcely a dozen newspaper men were present. From this time the interest among the publishers of the State in their State Association seemed to increase, and ever since the meetings have been well attended and very interesting and enjoyable.



PRES'T WM. P. NISBETT.

The 17th annual meeting was held at Bay City in June, 1884, followed by an excursion to Mackinaw and Marquette; 18th at Traverse City, a joint meeting with the West Michigan Association. This was the largest gathering of newspaper men ever held in the State; nearly 500 editors and their wives present. It was followed by an excursion to Charlevoix and Petoskey. The 19th was held at Coldwater the next year, and was also largely attended and followed by an excursion to Niagara Falls. The 20th was held at Port Huron, July, 1887; 21st in Detroit, May, 1888. Both were very enjoyable, the latter particularly so from the interest shown by Detroit citizens in seeing the Association properly entertained. The 23d annual meeting occurred at Grand Rapids in July, 1889, followed by an

excursion to St. Joseph, thence to Chicago by boat.

The meeting for 1890, which occurred at Saginaw in July, was largely attended, and one of the best in the history of the Association. It was followed by an excursion to Cheboygan, Sault Ste. Marie, Iron Mountain, St. Paul, and Minneapolis, the Yellowstone National Park, and Salt Lake City. Nearly 500 attended this meeting, 300 took the first trip to Sault Ste. Marie, 200 to Iron Mountain and St. Paul, and 60 to the Yellowstone, the long trip occupying about 30 days.

The present officers of the Association: Pres., Wm. P. Nisbett, of the Big Rapids Herald; Vice Pres., Fred Slocum, DETROIT JOURNAL; Sec., B. J. Lowery, Howard City Record; Treas., James Schermerhorn, Hudson Gazette. President Nisbett, whose portrait accompanies this sketch, first won newspaper fame as the publisher of the Pontiac Bill Poster, which paper he established and for several years conducted with signal success. Later he engaged in the real-estate business at Denver, but like most newspaper men soon returned to his first love, purchasing the Big Rapids Herald, which paper he has since published. He also prints a daily edition called the Bulletin. Mr. Nisbett is in the prime of life, and ranks as one of the brightest newspaper men of Michigan.

Military Department, Michigan, consists of the Governor as Commander-in-Chief, with a staff of 15, the Adjutant-General being in charge of the Military Bureau at the Capitol, and the Quartermaster-General in charge of the State property; and a Military Board of three, holding for two years. This Board is an advisory body to the Commander-in-chief on all State military matters, prepares rules and regulations for government of the State militia, has charge of the soldiers' cemetery at Detroit, and controls admissions to the Soldiers' Home at Harper Hospital, Detroit, or the State asylums for the insane. The State troops are organized in one brigade of four regiments, the Second and Third full, and the First and Fourth battalions of eight companies each, the last altogether a Detroit command, except a company each at Monroe and Ypsilanti. Total strength Dec. 1, 1890, 2496. State encampment of all in July or August each year—last two years at Battle Creek. [For roster of general and

brigade field-and-staff, regimental and company officers, see Appendix.]

Eugene Robinson, who holds the position of Brigadier-general, in Command of Michigan's militia, was born

May 24, 1838, at Binghamton, N. Y. The next year his parents removed to Detroit. After graduating from the high school he went to work under John F. Monroe as surveyor and engineer.



GEN'L EUGENE ROBINSON.

After two years of railroad work he opened an office for himself in the old Arsenal building on the site of the present City Hall.

He became a member of the Light Guard in 1857, and when the first call for troops came in 1861 Gen. Robinson enlisted in the First Michigan regiment as a sergeant. He fought at Bull Run, and was promoted to sergeant-major. At the expiration of the three months for which he had enlisted Gen. Robinson returned to Detroit and was made city surveyor. When the board of public works was created in 1872, he was mustered out of the municipal service and has been a contractor ever since. In 1881 the Detroit military companies were formed into the First Michigan battalion. Gen. Robinson was made colonel of the battalion, and when, in 1883, the battalion was changed into the Fourth Regiment by the addition of the Ypsilanti and Monroe companies, he was continued in that position.

Oct. 1 last Gen. Chas. Brown, colonel of the Third Regiment, resigned command of the State troops, and Col. Robinson was made Brigadier-general by Gov. Luce.

[In this connection an explanation should be made of the use of Captain Abel's portrait on page 15, and the absence of those of the other captains. It was the intention of the DETROIT JOURNAL to publish the portraits of all the captains, and this plan was abandoned only when in October it was learned that the December company elections would probably make several

changes, and that these changes would occur about the time the Year Book was being issued, or too late for correction. Before this, however (in September), the JOURNAL had the first 16 pages (one "form") printed, to use as a "dummy" in soliciting advertising for the back part of the book. Capt. Abel's name belonged on page 15, as coming early in the alphabet, and his resignation was learned as the work of printing was beginning, or too late to do more than insert the word "late" before the word "Captain." This explanation is given to prevent the State military from thinking the JOURNAL guilty of intentional discourtesy in using one and omitting all the others.]

Millionaires.—New York has more millionaires than any other city in the world, and they have the greatest average wealth. Berlin is also a great and wealthy city, but it has only 200 millionaires, or one to every 8000 of population; while New York has over 1000, or one to every 1600 people. Estimates in November last show an increase of 21 millionaires in this city over 1889, and 50 over 1888. John D. Rockefeller leads the list with \$135,000,000 and an income of \$6,000,000 a year, while his annual expenditure is only \$100,000. At 70 years of age it is estimated that his wealth will amount to 250 or 300 millions. Wm. Rockefeller his brother is also many times a millionaire. Henry M. and John H. Flagler, also Standard-oil magnates, are very wealthy, the former worth \$60,000,000. Every fourth house on Fifth avenue is said to be that of a millionaire. Jay Gould has \$75,000,000. W. W. and Wm. Astor, W. K., Cornelius, Fred W., and George Vanderbilt are immensely rich by inheritance, apart from their own gains. Other well-known names are C. D. Huntington, Andrew Carnegie, Henry Hilton, H. Victor Newcomb, Stephen V. White, Eugene Kelly, Calvin S. Brice (Senator from Ohio, though classed with New York millionaires), Henry Villard, Robert Bonner, and many others.

Mile.—The Werst mile, 1167 or 1377 yards; Roman, 1628 or 2025; English and American, 1760; Italian, 1766; Tuscan, 1808; Turkish, 1826; Scotch, 1884; Arabian, 2143; Irish, 2240; Dutch and Prussian, 6480; Flemish, 6869; Swedish and Danish, 7344; German, 8106; Vienna post-mile, 8296; Swiss,

9153. Experiments show that a man can swim an English mile in 26 minutes 52 seconds, can walk it in 6:23, on snow-shoes in 5:39½, run it in 4:13½, ride it on a tricycle in 2:49.4 or bicycle in 2:29.8, skate it in 2:12.6, cover it with a trotting-horse in 2:8½ or a runner in 1:39½, or a locomotive in 50½ seconds.

Mine.—The deepest in the world is at St. Andre du Poirier, France, and yearly produces 300,000 tons of coal. It is worked with two shafts, one 2952 feet deep and the other 3083. The latter shaft is being deepened, and will finally touch the 4000-foot level. A remarkable feature in this deep mine is the comparatively low temperature experienced, which seldom rises above 75° Fahrenheit.

Mississippi, Source of the.—The Minnesota Historical Society has settled a question raised by one Capt. Glazier, finding that neither Itasca, Whipple, nor Elk Lake is the source, but rather two small lakes west of Itasca and about 100 feet above it. So strong is the revolt against the Glazier claims that a law has been enacted affirming the name Elk Lake for the sheet he called Lake Glazier, and forbidding use in the schools of any books or maps bearing the latter title.

Money.—Articles or substances used (most of them still used in some parts of the world) as money are skins of animals, oxen, sheep, slaves, green-stone, whale's teeth, eggs, cakes of tea, musket-balls, tobacco, shells, cocoanuts, eggs, corn, beans, codfish, red ochre, red feathers, salt, silk, wood, mulberry bark, leather, gold, silver, platinum, tin, copper, iron, and lead. Quills of gold-dust and bags of chocolate grains were used by the Aztec races. The gold value of ancient money was about as follows: Shekel—gold, \$5.69, silver 53 cents; maneh—gold, \$569, silver \$32; talent—gold, \$56,900, silver \$1660; Persian daric or drachm, \$5.52; silver—beka 26½ cents, gerah 2½ cents, stater ("piece of money") 53 cents; denarius ("penny") 14 cents; copper—shekel 3.14 cents, assarium ½ cent, quadrans ¼ cent, mite ⅙ cent. [See also "Coins" and "Dollar."]

Monosyllables.—A new sonnet, to show the expressiveness and force of single-syllabled words, has been devised by Prof. W. C. Richards, Ph. D., the well-known scientific lecturer, as follows :

Mine be the force of words that tax the tongue
But once, to speak them full and round and clear.
They suit the speech or song, and suit the ear
Like bells that give one tone when they are rung,
Or bird-notes on the air, like rain-drops flung,
That pour their joy for all who pause to hear.
Their short, quick chords the dull sense charm
and cheer,
That tires and shrinks from words to great
length strung.
Strong words of old that shot right to the
brain,
And hit the heart as soon, were brief and
terse.
Who finds them now and fits them to his sling,
Smooth stones from books of English are his
gain,
Which shall make strong his thought in prose
or verse,
Wills he with scribes to write or bards to sing.

Montana is an immense State, third in size of the North American States. Its greatest length east and west is 540 miles; width, 275; area 145,776 square miles, at least one-third of them mountainous. Mean altitude, 3000 feet above the level of the sea. The output of precious metals in 1887 was over \$25,000,000, an increase of \$17,000,000 in five years. Population 131,769, against 39,159 in 1880, an increase of 92,610, or nearly 300 per cent. Butte City is the largest and busiest mining camp in the world.

Mortality.—According to our census of 1880, the annual bills of mortality in different countries, from the latest statistics accessible, were about as follow: In Italy, per 1000 of population, 30.5; Spain, 29.7; Austr.a, 29.6; German Empire, 26.1; France, 23.6; Belgium, 22.4; England, 20.5; Sweden, 18.1; United States, 18, the smallest death-rate of all.

Mountain, highest in the world, remains Mt. Everest or Gaurinsanhur, in the Himalayas, at 29,025 feet, almost exactly 5½ miles, high. There is no such eminence in New Guinea as Mt. Hercules, with a height of 32,768 feet, as sometimes published. A joint expedition of the American Geographical Society and U. S. Geological Survey, returning from Alaska last October, reported the height of Mt. St. Elias as heretofore over-estimated. They found it but 13,500 feet, against 19,500 before figured, which is exceeded by several peaks in the United States.

Mt. Hope Congregational Church, Detroit, grew from mission Sunday-school formed Nov., 1883, in an unfinished cottage on Twenty-fifth st., used until Oct., 1889, when removal was made to present site. Church organized about

same time, and now numbers about 60. It is under care and support of the First Congregational church. Rev. Wm. Mitchell, pastor; residence, 70 Maybury ave. Allan Bourn, Sup't of Sunday-school; office, M. C. R. R. depot.

Museum of Art, Detroit, is the direct outgrowth of the Art Loan Exhibition of 1883, which was conducted for the sole purpose of awakening an interest in art in Detroit, and to make possible the founding of an Art Museum and Art School on a scale commensurate with the importance of the city of Detroit. The exhibition was visited by 134,000 people and netted a handsome surplus, and was immediately followed by the raising of \$100,000 by Wm. H. Brearley for



the permanent Art Museum. Jefferson-ave. residents donated two lots on that avenue, corner Hastings, valued at \$25,000, on condition that the building should be located on them. The lots were accepted and the building, costing \$56,385.44, was erected, so that the formal opening occurred on September 1, 1887. The Museum is controlled by a board of eight trustees, two of whom are nominated by the mayor and elected by the city common council, and eight of the trustees are annually elected by the "corporation," who consist of those who have donated in money or art works the sum of \$1,000 or more to the Museum. The building, with its fine permanent collection, is open to visitors from 1 to 4 P. M. on Mondays, from 9 A. M. to 4 P. M. on all other week-days, and on Sundays from 2 to

4 P. M. The price of admission is 25 cents on week-days and free on Sundays.

The Academy (Art School) of the Detroit Museum of Art was founded in 1889. From its inauguration the school has been in every way a success, and it is now one of the best art schools in the country. During the first four terms the total attendance of scholars was three hundred and sixty-two, the largest attendance during one term being seventy-eight. But with the present term a new building has been erected, specially designed and built for the accommodation of classes, with a north light and large and airy studio. Special inducements have been offered in the way of prizes, there being eight scholarships offered in the various classes, in addition to the European scholarship of \$1000 offered in the life class to the competition of all students who have been a full school year in the Academy. So well have these advantages been appreciated that the attendance for the present term has increased to one hundred and fifteen, while inquiries have been received from intending scholars from all over the States. The rates of tuition are as low as in any art school in the country which is not absolutely free, and the corps of professors is able and enthusiastic. Pupils desirous of admission or information in regard to the school should address the Secretary, Detroit Museum of Art.

Nationalists.—The recent American reformers calling themselves by this name are an outgrowth of the agitation resulting from the remarkable book of Edward Bellamy, "Looking Backward." Their papers and discussions look to the nationalization of industry, or the ownership and control of all manufacturing and other industries by the Government. Their Declaration of Principles says: "The principle of the Brotherhood of Humanity is one of the eternal truths that govern the world's progress on lines which distinguish human nature from brute nature. The principle of competition is simply the application of the brutal law of the survival of the strongest and most cunning. Therefore so long as competition continues to be the ruling factor in our industrial system the highest development of the individual can not be reached, the loftiest aims of humanity can not be realized. No truth can avail unless practically applied. Therefore those who seek the welfare of man must endeavor to suppress the

system founded on the brute principle competition and put in its place another based on the nobler principle of association. But in striving to apply this nobler and wiser principle to the complex conditions of modern life, we advocate no sudden or ill-considered charges; we make no war upon individuals; we do not censure those who have accumulated immense fortunes simply by carrying to a logical end the false principle on which business is now based." Nationalist Clubs have been organized in many States and have many thousand members, including some of national renown. A club of moderate size and activity has existed in Detroit since the winter of 1889-90.

National Editorial Association.—This organization is made up of delegates from the various associations of editors and publishers of the United States. The basis of representation is one delegate for each twenty members of the affiliating bodies, the President and Secretary of each also being made members by virtue of their office. The declared object is "the advancement of the material interests and extension of the social relations of the editors and publishers of the United States." At the last annual meeting held in Boston, June 24-27, forty-eight associations were represented by two hundred and eighty delegates. A great variety of topics, relating to the editing, printing, and publishing of newspapers, were discussed and action taken looking to co-operation in regulating the prices and in securing certain lines of advertising, as well as in attempts to obtain needed legislation and to forward other desired objects.

The Association was organized in New Orleans, La., through the persistent efforts of B. B. Herbert, then President of the Minnesota Editors' and Publishers' Association, and editor of the *Daily Republican*



B. B. HERBERT.

and the *Weekly Advance-Sun* at Red Wing, Minn. He has since, in accordance with a vote of the Association,

founded the *NATIONAL JOURNALIST*, published at 21 Plymouth Place, Chicago, Ill., of which he is now editor, and which is the official paper of the organization and devoted to the forwarding of all matters that pertain to organized journalism and the upbuilding of the editorial profession and the business of publishing and printing. Annual conventions have been held as follow: 1885, New Orleans; 1886, Cincinnati, followed by a trip through Florida; 1887, Denver, with an excursion through the Rocky Mountains; 1888, San Antonio, followed by a trip to the old city of Mexico; 1889, Detroit; 1890, Boston; and the 1891 meeting will be in St. Paul, Minnesota, on July 16. The President of the Association is E. W. Stephens, of Columbia, Missouri.

Naturalization.—The formalities for making a foreigner a citizen in this country are simple and easy. After five years' residence here he may present himself before any court of record (having seal and clerk), and swear that he renounces all foreign allegiance and will support the constitution of the United States, of which he declares his intention to become a citizen. At least five years afterwards, and when he has resided a year or more in the State where he applies, he must again go into court, exhibit his declaration papers, and make a showing of good moral character, when he will be admitted to full citizenship. In about one half of the States, including Michigan (where he must have resided 2½ years), he can vote upon his declaration; in the other States he must have full naturalization. His children under 16 at the time of naturalization, and all born subsequently, are treated as if native-born. An honorably discharged soldier of the army may become a citizen without previous declaration of intention, if he has lived in the country for a year.

Nebraska gained in population three-fold (from 28,841 to 122,993) 1860-70, 270 per cent (to 452,433) 1870-80, and 63.6 per cent (to 740,645) 1880-85. Its present population is 1,056,793, an increase of 135.17 per cent since 1880—much the largest of any State not very recently admitted.

New Mexico is the greatest of the remaining Territories, not counting Alaska. It has an average length and breadth of 368 by 335 miles, and an area of 122,444 miles. It could contain

the entire States of New England and New York, and nearly New Jersey besides.

New Jerusalem Church, Cass ave. and High st., Detroit, was dedicated Nov., 1872. Value of church property, about \$20,000; sittings, 300; membership, 80. Sunday morning worship at 10:30. evening at 7:30; Sunday school at 12. Expenses are met by weekly voluntary offerings, and all seats are free; public cordially invited. Rev.

Albinus **REV. A. F. FROST.** Finney Frost was born at Olivet, Mich., May 11, 1847, graduated at Olivet College, studied at the Theological School of his church at Waltham, Mass., was ordained at Bridgewater, Mass., Oct. 16, 1873, preached at Salem, Mass., 1872-79 and Cleveland, O., 1879-83, and took his Detroit pastorate Sept., 1883. Residence, 417 Fourth ave.; call at any time.



REV. A. F. FROST.

Ninde M. E. Church, Twenty-eighth and Visger sts., Detroit, was organized in 1886, and dedicated its chapel in December; value \$3500. Membership, 70; Sunday-school, 110. Sunday preaching at 10:30 and 7; Sunday-school at 12. Pastor Guy M. Bigelow was born in Detroit Jan. 2, 1859; graduated with class of 1881, Univ.

of Mich.; joined Detroit Conference 1888, and was appointed to Ninde church Sept., 1890. Residence, 1171 Scotten ave.



REV. G. M. BIGELOW.

Normal School, Michigan.—This fine institution had its origin in the feeling consequent upon the break-up of the

branches of the State University, which prompted the people to demand special means for the preparation of teachers. In answer to numerous petitions, the Legislature of 1849 passed a law for the foundation of a normal school, which

was located at Ypsilanti, opened in 1852, and graduated its first class two years after. Its governing body is the State Board of Education — three members, elected by the people, with the Superintendent of



PROF. J. M. B. SILL.

Public Instruction for Secretary ex-officio. Prof. J. M. B. Sill, Principal State Normal School, was born Nov. 23, 1831, in Black Rock, N. Y., now part of Buffalo; came with parents to Jonesville, Mich., 1836; among first graduates from State Normal School, 1854; taught in the school till 1863; first Superintendent of Detroit Public Schools 1863-65; Principal Det. Female Seminary 1865-74; again Supt. Det. schools, 1874-86; Principal Normal School 1886 to date; also President of Teachers' Association, 1861; Regent of State University, 1867-70; and honorary M. A. by conferment of University in 1878.

North Baptist Church, Detroit, organized Feb. 10, 1888, with a membership of 47, has a neat chapel at the Boulevard and Woodward

ave., dedicated Nov. 3, '89, and a parsonage adjoining, the whole property worth about \$22,000. Regular sittings, 350, with total capacity of 400. Membership, 111; Sunday-school, 200,



REV. R. E. MANNING.

over half in the primary department, the success of which is mainly due to the energy and

devotion of its Superintendent, Mrs. J. P. Johnson. Sunday services 10:30 and 7:30, Bible-school 12, young people's meeting 6:45; Wednesday evening prayer-meeting 7:30. Pastor R. E. Manning was born March 31, 1840, in Penfield, Monroe Co., N. Y., entered the ministry 1874, and his present field Dec., 1887. Residence at parsonage, No. 17 Boulevard west.

Newspapers.—The total number in different countries is estimated at 43,000 about as follow: United States, 17,000; Germany, 5500; Great Britain, 6000; France, 4092; Japan, 2000; Italy, 1400; Austria-Hungary, 1200; Asia, exclusive of Japan, 1000; Spain, 850; Russia, 800; Australia, 700; Greece, 600; Switzerland, 450; Holland, 300; Belgium, 300; all others, 1000. About one-half of all are printed in the English language. By Rowell's Newspaper Directory, periodicals of all kinds in this country in 1889 numbered 16,319, of which 2,959,566,500 copies were printed during the year.

Oceans.—The greatest depth in the several oceans yet ascertained is: In the North Pacific, 27,667 feet; South Pacific, 26,328; North Atlantic, 27,108; South Atlantic, 23,935; Indian Ocean, 19,019.

Ocean Steamers.—Three magnificent ones have been recently built, expressly for speed, and each expected to break the record of the Inman steamship "City of Paris," which crossed the Atlantic in 5 days, 19 hours, and 18 minutes. The "Normannia," built by the Hamburg-American Line, is a ship of 8000 tons and has engines of 12,000 horse-power. "La Touraine," of the French Line, is superbly decorated and cost over \$1,500,000. The other is the "Majestic," of the White Star Line.

Ocean-waves, Height of.—By a very ingenious arrangement of sensitive aneroid barometers with recording apparatus, floated on the surface, it has lately been ascertained that ocean-waves reach a height of 40 feet in a fairly heavy sea. Measurements from violent gales are not yet reported.

Oil Pipe Lines.—Some of the pipelines conveying oil to the large cities are of surprising length, for such constructions. That from Olean, N. Y., to the vicinity of New York City, is about 300 miles long; another, from Colgrove, Pa., to Philadelphia, nearly 280; others—Lima, O., to Chicago, over 200; Millard's, Pa., to Cleveland, 100; Four-

mile, N. Y., to Buffalo, and Midway Station to Baltimore, 70 each; Carbon Center, Pa., to Pittsburg, 60. All these, and several more, are owned or controlled by the great Standard Oil Company, under the name of the National Transit Company.

Oranges.—The shipment of 1890 from Southern California is estimated by the agents of the Southern Pacific Railroad at 8750 car-loads, against 2600 the year before. In 1888 the Riverside settlement of 6000 acres, near Los Angeles, produced fruit crops worth \$1,500,000, or \$250 an acre.

Paper.—Among the most remarkable recent manufactures from paper are a pulley of hydraulic-pressed pasteboard, with an iron core and strong casing, said to have greater friction than one of iron, and making it possible to use smaller pulleys and to save vibration by reducing the tension of belts. It is made from the well-known oil-paper employed for car-wheels. Handles for files and other tools are being made from compressed, chemically prepared paper, and are hard, smooth, light, durable, and very convenient.

Pardon is a name now often coupled with "Kermess," the title given to a fashionable form of charity festival or entertainment introduced quite recently into this country. *Pardon* is the old French word for the prayer now called the "Angelus," which supplies the theme of the famous Millet painting, and was given to it because pardons were granted to those who at the stroke of the bell, morning, noon, and sunset, should repeat the Angelic salutation, and thus aid in averting the danger of a threatened invasion. But in some parts of France, notably in Brittany, the word is used to designate assemblies of pilgrims held near churches or shrines of peculiar interest. Fires are often lighted on neighboring hills, and are a favorite feature of Breton fetes. It is believed that those who dance around nine of the fires before midnight will be married within the year. The Pardon, like the Kermess, gradually assumed in addition to its devotional character that of a rustic festival. Dancing is a pronounced feature of the festivities, and is participated in with a frenzy of delight. This is a pardon fair. [See "Kermess."]

Parliament, British.—The House of Lords contains 5 princes of the blood-royal, 2 archbishops, 24 bishops, 485

English hereditary peers, and 16 Scotch and 28 Irish representative peers. The former in the last class are elected for each Parliament from the whole body of Scotch peers, the latter for life from the Irish peers. The House of Commons has 670 members, elected by the boroughs, county divisions, and universities of the entire United Kingdom, but not the colonies. The reform suffrage act of 1884 enlarged the number of electors to Parliament from 3,152,910 in 1883 to 5,836,907 in 1888.

Pascal.—A mighty genius was the French thinker, writer, and preacher, Pascal. At 12 years of age, with bars and hoops, he invented mathematics; at 16, wrote the most learned treatise on conic sections that had been seen for centuries; at 19, reduced to machinery a science which exists entirely in the mind; at 23, demonstrated the phenomenon of the weight of the air, and destroyed one of the great errors of ancient physics; at an age when other men scarce begin to live, having run through the circle of human sciences, he perceived their insufficiency and turned his thoughts to religion. Between the time, then in his 39th year, and his death, though always infirm and suffering, he established the language which Bossuet and Racine spoke, and in his writings gave specimens of the most perfect logic; and finally, in the brief intervals of pain, resolved, by abstraction, one of the most difficult problems in geometry, and left on paper thoughts which seem as much divine as human.

Passion Play.—During the Middle Ages "Miracle" (mystic or religious) plays were common throughout Europe.

They retained their hold upon the affections of all classes for several hundred years, and were not displaced even by the religious commotions of the 16th century. Many partisans on either side approved of them,



JOSEPH MAYER, the "Christ."

and Luther is reported to have said that they often did more good and produced

more impression than sermons. The European wars, however, and the abuses which crept into these sacred dramas and compelled the civil authorities to interfere, led gradually to their entire disuse in 1790. In 1811 the "Passion Play" was revived in the town of Oberammergau, a little mountain village in the Bavarian Tyrol, 75 miles southwest of Munich, where in consequence of a vow made by these villagers, as a result of which they believe that a plague was stayed, the play has since been produced every tenth year. In 1880 over 120,000 people attended it, and the receipts exceeded \$80,000. The recent representation (1890) was much more successful. Of the 1500 inhabitants of the village, about 900 actually participate as actors in the play. The drama covers the period of Christ's life, from the Last Supper to the Ascension, and is said to be characterized by most devout and earnest feeling, and to be strikingly



ROSA LANG, the "Virgin Mary."

impressive and effective. The accompanying portraits are made from photographs taken in 1890 from the play direct. They are of Joseph Mayer, who takes the part of the Christ, and of Rosa Lang, who personates Mary, the mother of Jesus. Those who have attended the play, remark the wonderful adaptation of the peasants to the characters they assume, some indication of which may be gained from the two whose portraits accompany this article. Joseph Mayer personated the Saviour in 1870, 1880, and again in 1890. The one who took the part of John is already spoken of for the "Christus" in 1900, when the next representation will be given.

Patents.—The last report of the U. S. Commissioner of Patents shows operations of his bureau for the fiscal year ended June 30, 1890, as follow: Applications for letters patent, 40,201; for design patents, 1003; for reissue patents, 121; for registration of trademarks, 1617; for registration of labels,

868; caveats received, 2330. Total 46,140, against 42,047 the previous year. Receipts for the year, \$1,347,203; expenditures, \$1,081,173; surplus, \$266,030, against \$186,859 in 1888-89. Balance in the treasury on account of the patent fund, \$3,790,556. Only 436 patents were issued by this office in 1887, against 21,477 fifty years after.

Patrons of Industry, recently appearing as a factor in politics, is the name of a comparatively new element in the long list of fraternal organizations. The order now numbers about 100,000 members in Michigan and probably as many more scattered throughout New York, Ohio, Indiana, Illinois, Wisconsin, Minnesota, South Dakota, Iowa, and Ontario. Rev. F. W. Vertican, of Port Huron, is called the father of the organization, he having first conceived the plan in 1884. F. H. Krause and D. W. Campbell, of the same city, were induced to join the project, and latterly I. R. Wadsworth, then superintendent of the P. H. & N. W. Railway. These four were the original incorporators. The first subordinate organization was effected in a little log house in Sanilac county, and others followed, the purpose of the organization being to bring the farming community into closer relation and secure their betterment along social, financial, and political lines. The first State convention was called at Port Huron in April, 1889, and was followed by a national convention held in the same city one month later. At this gathering a new constitution was adopted and a more thorough organization effected. The growth of the order has been rapid ever since, the work of organizing spreading into the other States in September of the same year. In January, 1889, F. H. Krause, who was grand treasurer of the order, began the publication of a monthly paper called the *Patrons' Guide*. This was later made the official organ of the order and has reached a circulation of 75,000 copies per month. In October 1889 a weekly paper called the *Western Farm and Home* was started by Mr. Krause, which has also been made an official organ of the order. The supreme association is the national organization; its supreme officers are: President, F. W. Vertican, Port Huron; Vice-President, John Andrew, Bad Axe; Secretary, I. R. Wadsworth, Port Huron; Treasurer, F. H. Krause, Port Huron; Sentinel, Charles Rice, Sparta; Finance Committee, H. B. Gillard,

Redman, B. E. Niles, Blissfield, C. H. Whittum, Eaton Rapids.

Michigan was the first State to organize a grand or State association; the first grand president was F. S. Porter, of North Branch. The present Grand officers are: President, A. S. Partridge, Flushing; Vice-President, C. V. DeLand, Jackson; Secretary, J. E. Taylor, Greenville; Treasurer, Jos. J. England, Caro; Sentinel, H. A. Daniels, Elva; Finance Committee, D. Conklin, Ula, G. D. Moore, Medina, C. H. Morse, Carson City.

The plan also provides for county organizations, which are known as county associations, and also subordinate associations. These latter shall not be organized within three miles of another association.

The State of Ohio was next to organize as a grand association, which was accomplished in October last. The officers are as follows: President, Ira D. Smedes, Metamora; Vice-President, W. H. Strong, Java; Secretary, Jerome Storms, Cummings; Treasurer, Frank Weirich, Colton; Sentinel, W. A. Phillips, Knoxville; Trustees, Samuel A. Justus, E. H. Ester, and John S. Hart.

Indiana followed close by electing the following grand officers: President, John Chalmers, Kendallville; Vice-President, Wilson Teeters, Fremont; Secretary, J. H. Eckles, Harlan; Treasurer, G. W. Hanes, Butler; Sentinel, A. J. Hinkle, Seybert; Board of Trustees, E. H. Sherman, Kendallville; J. C. Hodges, Waterloo; D. S. Kindeg, Elkhart.

Other States are expected to follow at an early day. The next national convention is called to be held in Lansing, Michigan, in May, 1891, and promises to be an important gathering.

In this same connection might be mentioned a new phase of the Patron plan which developed at the December meeting of the Executive Committee of the Grand Association for Michigan, held in Lansing. At this meeting there was organized and incorporated a company with a capital stock of \$100,000, to be known as the *Patrons' Commercial Union of Michigan*. The officers are: President, C. V. DeLand; Vice-president, Geo. D. Moore; Secretary and Manager, D. A. Reynolds; Treasurer, C. H. Morse. The company's stock is sold at \$5 per share and the head office is located at Lansing, with branches at different points throughout

the State. It is virtually a purchasing agency for the membership, and also a distributing agency for farm products.

Pensions.—The late report of the Commissioner of Pensions shows 537,944 pensioners upon the rolls, as follow: Army invalid, 392,809; navy invalid, 5274; army widows, etc., 104,456; navy widows, etc., 2460; survivors of War of 1812, 413; widows of soldiers of 1812, 8610; survivors of Mexican War, 17,158; widows of soldiers in such war, 6764. The Commissioner estimates 1,246,089 survivors of the Civil War July 1, 1890, about 106,000 of them 62 years old and upwards. He announces the following classes entitled to pensions:

Any officer, including regulars, volunteers, and militia, or any officer of the marine corps, or any enlisted man, however employed in the military or naval service of the United States, or in its marine corps, regularly mustered or not, disabled by reason of any wounds or injury received or disease contracted when in service and in line of duty.

Any master serving on a gunboat, or any pilot, engineer, sailor, or other person not regularly mustered serving upon a gunboat or war-vessel of the United States, disabled by any wound or injury received, or otherwise incapacitated while in the line of duty for procuring his subsistence by manual labor.

Any person not an enlisted soldier in the army, serving for the time being as a member of the militia of any State, under orders of an officer of the United States, or who volunteered for the time being to serve with any regularly organized military or naval force of the United States, or who otherwise volunteered and rendered service in any engagement with rebels or Indians, disabled in consequence of wounds or injury received in the line of duty in such temporary service; but no claim of a State militiaman or non-enlisted person shall be valid unless prosecuted to a successful issue prior to July 4, 1874.

Any acting assistant or contract surgeon, disabled, etc., in the line of duty.

Any provost marshal, deputy provost, or enrolling officer disabled by reason of any wound or injury received in the discharge of his duty, from procuring a subsistence by manual labor.

The widows and minor children of those embraced in sections 4692 and 4693 of the pension laws, by force of section 4702.

Widows of colored and Indian soldiers and their minor children, by force of section 4705.

Dependent mothers, fathers, and brothers and sisters of those embraced in section 4692 and 4693, by force of section 4707.

Officers and seamen of the navy disabled prior to March 4, 1861, by force of section 4728.

Widows and minors of officers and seamen of the navy disabled prior to March 4, 1861, by force of section 4729.

Regulars or volunteers disabled in the Mexican war, by force of section 4730.

Widows and children of regulars or volunteers who died by reason of injuries or disease contracted in the Mexican war, by force of section 4731.

Widows and minor children of persons engaged in the Mexican and various Indian wars, by force of section 4732.

Soldiers and sailors who served in the war of 1812, by force of section 4735.

Surviving widows of officers, soldiers, and sailors of the War of 1812, by force of section 4738.

Officers and seamen of revenue-cutters who have been or may be disabled or wounded in discharge of their duty while co-operating with the navy by order of the President, by force of section 4741.

Wounded privateersmen, by force of section 4761.

Widows, children, dependent mothers and fathers, or orphan brothers and sisters of those soldiers who were murdered by guerrillas at Centralia, Mo., in 1864, by force of act of March 8, 1875.

Surviving soldiers and sailors of the Mexican war, and the widows of the same, by force of act of June 23, 1837.

Soldiers and sailors of the War of the Rebellion who served ninety days and were honorably discharged the service, and who are incapacitated for performance of manual labor, and for their widows, children, and dependent parents, by force of act of June 27, 1890.

Peripatetic Churches.—The Episcopal Bishop of North Dakota has a cathedral car just built, externally very much like a Pullman, but with a Gothic projection somewhat suggestive of a church. Inside it is neatly fitted for a church, with 75 sittings, chancel, altar, etc., and a small room for robing. It will be used in the Bishop's mission work along the railways, stopping a day or two at each place. A car of the same size (60 by 10 feet) and character is building for the Baptists, who will send two missionaries with it through the Northwest, in summer providing a larger auditorium in a tent. The Church of England has a Gospel-ship for similar purposes plying from London to the fisheries of the North Sea; the Catholics a cathedral ship upon the Amazon; and Captain Bundy, an independent evangelist with headquarters in Chicago, runs a small Gospel-steamer upon the Great Lakes. The foreign mission societies have a number of steamers and sailing-vessels in their service, but none of them fitted with audience-rooms.

Pocket, the, was first a purse or pouch, and then a girdle. The ancient Hebrews carried a pouch, and the Roman matrons a handbag, which originated the modern reticule. They were first made of netting, later of leather. The Romans came nearer to having a pocket than any other people until modern times. A portion of the toga was bound in a knot under the left breast, and a protuberance was there formed divided into many folds, which was named *sinus*, and answered the purpose of a pocket. The Roman

matrons concealed valuables about their persons in the upper part of the *stroftum*, a kind of corset, fitting the waist tightly, yet loose at top. Charlemagne carried a traveling pouch which was suspended from his person. The Saxons had purses, and the Normans when they came to England carried the *aulmoniere*, a little purse for carrying alms for the poor, suspended from the girdle. The fashion of carrying the purse in that way, but not for that purpose, has revived of late years. The general purse was of triangular form, frequently ornamented with beads or trimming and suspended from the girdle. Bankrupts figuratively gave up their effects to their creditors by putting off the girdle to which the purse and keys to their estate were attached. So long as girdles were worn there was little need of a pocket, for custom and convenience made it a habit to thrust anything within the encircling band.

Population, Density of.—The greatest density of population in the world is in parts of New York City, where the rate is actually 185,000 to 243,000 people to the square mile. In 1875 the rate in six different wards was 160,000, 176,000, 195,000, 203,000, 208,000, and 243,000, against a greatest density in London of 176,000. In three wards two-thirds of their area were covered with tenements, and each tenement had an average of but 12 to 15 square yards, against 107 for the city at large. Less than thirty acres of the Fourth ward contained 17,611 people, at the unexampled rate of 370,000 to the square mile, 290,000 with allowance for streets. At this average density, New York would have a population of 6,500,000. Sixteen families, or 80 persons, have been found in a single dwelling of 25 feet front.

The average density of population in the world is 28 to each square mile of land area. Europe has 82 to the mile, or one to about every 8 acres; while in Australia, Polynesia, and on some of our Indian reservations, there is scarcely more than one person to the square mile. Asia, 48; Africa, 17½; North and South America together, 5½. Were the whole earth as densely populated as Europe, it would contain 4,209,945,600 souls.

Post-offices.—The last annual report of the Post-office Department shows of removals of postmasters of all classes

about 1000 were on the reports of Inspectors. In 1579 cases of change of name and site there were only 665 new appointments, in each of the 914 cases the incumbent being retained. In number of new offices for the fiscal year Pennsylvania leads with 250, Texas follows with 207, Virginia 200, Kentucky 199, Alabama 197, and Georgia 196. New Hampshire and Rhode Island had the smallest number of new offices, 9 each. The new State of Washington increased its offices by 132, Alaska by only 8. New offices in all the States and Territories are increasing rapidly. Whole number of post-offices July 1, 1890, 62,400, against 58,999 in 1889, 57,376 in 1888, 55,157 in 1887, and 40,021 in 1880. Increase during the last year 4401, the largest in the history of the country. The increase during 1888 was 1623.

The New York Post-office is the largest business establishment, and concerns the largest number of people, of any in the Union. It handles annually about 400,000,000 letters, papers, etc., or about six times as many as the entire population of the country numbers. Its yearly money-order business is not less than \$85,000,000 and its own receipts \$5,000,000, of which \$3,250,000 are net profit to the Government.

Pulse.—Experts say the normal rates are about as follow: In the new-born infant, 130 to 140 per minute; during first year, 115–130; second, 100–115; third, 95–105; seventh to fourteenth, 80–90; fourteenth to twenty-first, 75–85; twenty-first to sixtieth, 70–75; in old age, 75–80.

Puzzles and Games.—**Buzz:** This game often makes much sport. All who are to play are seated about the room, and commence by counting in turn, one, two, three, etc. When seven is reached, or any number containing seven, or any multiple of seven, the word buzz must be substituted. Thus seven, fourteen, etc., would be Buzz, while seventeen would be one-buzz; twenty-seven, two-buzz; seventy-one, Buzz-one; seventy-seven, Buzz-buzz, etc. Any player who fails to respond promptly and properly is dropped, and the game goes on with those remaining.

A SUNDAY PASTIME FOR CHILDREN: Give each child a pencil and sheet of paper; appoint a time-keeper, and when he calls "time" each one is to write as many names of Bible personages com-

mencing with A as possible, as Abel, Aaron, etc. At the end of one minute time will be called again, and the writing must instantly cease. Then each will read his list, getting credit for each correct name, and forfeiting two for each one found to be incorrect. Then take up the next letter of the alphabet, and so on. An hour may thus be profitably spent, and no little knowledge will be obtained.

A RHYMING GAME: The following illustrates this game: "I have a word in mind that rhymes with eye," begins the leader. "Is it a kind of grain?" asks one. "No; it is not rye." "Is it a word often used by an inquiring child?" "No; it is not why." "Is it a word sometimes applied to a horse?" "No; it is not high." "Is your word an answer?" "No; it is not a reply." "Is it something on the dinner-table on Thanksgiving day and Christmas?" "Strange to say, I am not thinking of pie." "Is it something that we can see everywhere?" "It is the sky."

GUESS MY THOUGHT: I have in mind a little creature called by some an insect. It is of various sizes and colors. In some countries it is very poisonous. There are kinds that live under the water. Very small ones are injurious to plants. They have many eyes and four times as many legs as a bird has. Usually they eat small insects, but occasionally a wife eats her husband. They do not sing, but they prey. By this time, some one has found out what my thought is, and suggests that "It is a weaver by trade," or asks if it is not a spider.

DECAPITATIONS: Behead a color, and leave a beam of light; a small wood, and leave to wander about; a powerful motive agent, and leave what moves an ordinary vehicle; a gay assembly, and leave the whole; an implement used in war, and leave the sign of an idea; a period of time, and leave a part of the head; something that we eat every day, and leave something that we do every day; a pronoun that points out things at a distance, and leave a portion of everybody's dress; a deceiver, and leave what is most to be desired when the thermometer goes below zero. Take the first two letters from a cup, and leave a very pretty name for a girl. Take away the equivalent of 500 from a word of two syllables meaning to wish, and leave a quaint term for father. Take away the equivalent of ten from a word of two syllables meaning to say,

and leave an important part of a printing establishment.

PIED CITIES: Ogiacgh, Sotnob, Alhipleadiph, Madene, Mneacsarot, Singhownat, Rapsi, Oonld, Udnibl, Royk, Asggwol, Vlirelopo.

PIED MICHIGAN TOWNS: Kacancim, Laddrowet, Methusec, Yobnegach, Saleceh, Roac, Bolina, Naglins, Sankjoc, Phutmoyl, Tyonawted, Wicagoda.

RHYMED ENIGMA.

I'm a city found in Northern Spain;
I'm a city, too, in Michigan;
Of syllables three, my number two
Is just what a boy delights to do;
My first you'll see in a business way
On street signs wheresoe'er you stray;
Reverse my third,—the act will bring
A word not worth the mentioning.

GEOGRAPHICAL QUESTIONS.

What has a mouth, but can not bite?
What has an arm, but can not write?
What has a foot, but can not walk?
What has a head, but can not talk?
What has a bank with no money in?
What has a top that can not spin?
What has a neck, but has no head?
What never sleeps, but has a bed?
What hook will never catch a fish?
What has a basin, but not a dish?
Where are the locks keys do not turn?
Where are the capes that are not worn?
What has a branch, but has no leaves?
What has no locks, but has some keys?
What always falls, but gets no scratches?
What is the ball that no one catches?
What is quite long, but is not tall?
What has a base, but plays no ball?
What are the poles that nobody climbs?
Where are the boys to answer these rhymes?

WHY IS A MAN LIKE OLD SHOES?

How much a man is like old shoes!
For instance, both a sole may lose;
Both have been tanned, both are made tight
By cobblers. Both get left and right,
Both need a mate to be complete,
And both are made to go on feet.
They both need healing, oft and sold,
And both in time all turn to mold.
With shoes the last is first; with men
The first shall be last, and when
The shoes wear out, they're mended new;
When men wear out they're men dead too.
They both are trod upon; and both
Will tread on others, nothing loath.
Both have their ties, and both incline,
When polished, in the world to shine;
And both peg out—and would you choose
To be a man, or be his shoes?

CURIOSITIES OF THE ALPHABET: B makes road broad, turns the ear to bear, and Tom into tomb. C makes limb climb, hanged changed, a lever clever, and transports lover to clover. D turns bear to beard, a crow to crowd, and makes anger danger. F turns the lower regions to flower regions. G changes a son to a song and makes one gone. H changes eight to height. K makes now know and eyed keyed. L transforms pear into pearl. N turns a line into linen, a crow to a crown, and makes one none. P metamorphoses lumber

into plumber. S turns even into seven, makes have shave and word sword, a pear a spear, makes slaughter of laughter, and curiously changes "having a hoe" to "shaving a shoe." T makes bough bought, turns here there, alters one to tone, changes ether to tether, and transforms the phrase "allow his own," to "tallow this town." W does well; e. g., hose are whose, are becomes ware, on won, omen women, so sow, vie view; it makes an arm warm, and turns a hat into—what? Y turns fur to fury, a man to many, to toy, rub to ruby, ours yours, a lad to a lady.

Races of Mankind.—M. de Quatrefages, the eminent French ethnologist, estimates no fewer than 72 distinct races in the human species, all from three fundamental types, black, yellow, and white, which had their origin at the great central mass of Northern Asia, the cradle of mankind, where representatives of the types and races are still to be found. The whites appear to have originated on the west of the central mass, yellows on the north, and blacks on the south. The first extended westward and northward, giving birth to three secondary types, the Finnish, Semitic, and Aryan, except the Allophyles, a separate group. Their area of distribution is continuous, as is that of the yellows, from the extensive land-surface of the Eurasian continent. The latter spread eastward and crossed into America. Whites and yellows checked or blended with each other, producing many varieties. The black or negro type, originating on the south of the central mass, was forced by the nature of the continent, and probably by the attacks of whites and yellows, to go south into Africa and east into the Indian Archipelago or Melanesia. The proto-Semites arrested their distribution in the north of Africa, and the mixture of the two races gave rise to the negroid populations. In the center and south of Africa the blacks continued in their ethnic purity until the infiltration of other races from Europe and the north of Africa in modern times. Those remaining in their original home became blended with whites and yellows, giving rise to the Dravidian populations, which pass by shades into the three fundamental types. The Allophyles, represented by the race of Cro-Magnon, occupied parts of Europe and North Africa, and extended to the Canaries. The three fundamental types are also

found in Oceanica, Allophylian whites Polynesia, blacks Melanesia, yellows Malaysia. The peopling of America dates from the quaternary period, and is due to migrations of different types, Allophylic white and yellow blending with the local quaternary races, which also belonged to the yellow type. Europe since the tertiary ages has received only Allophylian whites, Finns, and Aryans. The number of races now existing in a pure state is exceedingly restricted, if indeed there is a single one which can be accepted as such.

Railroads.—Only about 5000 miles of new railway were constructed in this country in 1889, the smallest number of any year since 1885. None were reported from Vermont, Rhode Island, Nevada, Arizona, and New Mexico. Sixteen States had 100–200, Mississippi 212, Texas 270, North Carolina 279, Georgia 315, Washington 353, Mexico 369, Canada 733. January to July inclusive, 1890, 352 miles of new track were laid in the Northwestern States, 876 were under construction, 2196 under survey, and 4854 projected. The estimated strength of organizations of railway employees is: Brotherhood of Locomotive Engineers, 20,000; of Locomotive Firemen, 18,000; of Trainmen, 16,000; of Conductors, 2000; Switchmen's Mutual Aid Association, 6000. The last four, numbering 42,000, are federated. The following dates are said to be authentic for the introduction of steam railways in different parts of the world: England, Sept. 27, 1825; Austria, Sept. 30, 1828; France, Oct. 1, 1828; United States, Dec. 28, 1829; Belgium, May 3, 1835; Germany, Dec. 7, 1835; Cuba, 1837; Russia, April 4, 1838; Italy, Sept., 1839; Switzerland, July 15, 1844; Jamaica, Nov. 21, 1845; Spain, Oct. 24, 1848; Canada, May, 1850; Mexico, 1850; Peru, 1850; Sweden, 1851; Chili, Jan., 1852; East Indies, April 18, 1853; Norway, July, 1853; Portugal, 1854; Brazil, April 30, 1854; Victoria, Sept. 14, 1854; Colombia, Jan. 28, 1855; New South Wales, Sept. 25, 1855; Egypt, Jan., 1856; Middle Australia, April 21, 1856; Natal, June 26, 1860; Turkey, Oct. 4, 1860; Japan, 1872; China, 1876; Central Asia, 1885.

Rainfalls, Average Annual.—On the equator, 100 inches; 20th parallel, 80; 40th, 40; 50th, 30; 70th, 10; 80th, 5; Siberia, 10; Russia, 14; Germany 20; British Isles, 32; United States, 39. Snowfall is included, figured in inches

of water. The latest investigations into the influence of forests on rainfall are not favorable to the theory that their presence or absence materially affects the yearly average.

Recipes.—**AN EXPENSIVE BUT DELICIOUS CORN-BREAD.**—Mix thoroughly in a sieve, and then rub through it a pint of white meal, a pint of flour, two heaping tablespoonfuls of sugar, one teaspoonful of salt, and two of baking powder. Beat five eggs till very light, and add to them a scant pint and a half of milk. Stir this liquid mixture into the dry one, and add a quarter of a cup of melted butter. Pour into shallow tins, make about one inch deep, and bake in a moderate oven for half an hour.—*Maria Parloa.*

WHOLE-WHEAT MUFFINS.—Dissolve one-half cake compressed yeast in one-half pint of milk, and add milk to make a pint. Stir into this three cups of whole-wheat flour, and set in a warm place to rise. When light add two well-beaten eggs, and pour the mixture into gem-irons, filling only half-full. When very light, bake in a quick oven. Two tablespoons of sugar and Zante currants may be added when light.

GOOD CORN MUFFINS.—Mix together in a sieve and rub through it a teacupful of cornmeal, twice as much wheat flour, one-third cupful of sugar, one teaspoonful of salt, and three teaspoonfuls of baking powder. Place a cup with two tablespoonfuls of butter in it in a basin of hot water, beat three eggs very light, add a large cupful of milk and pour over the flour, etc., beating all the while. Stir in last the butter, and bake twenty minutes.—*Maria Parloa.*

TOMATO SOUP.—Materials, one pint of well-cooked tomatoes, free from lumps and part if not all of the seeds, one pint of rich milk, one pint of water, an even teaspoonful of soda, and a little salt, pepper, and butter. Bring the water and tomatoes to a boil, and add the soda; then have the milk warm, add it to the mixture, and bring once more to the boiling point. Put in the salt, pepper, and butter, and serve immediately.

CREAM PEA SOUP.—If dried peas are used, put three-fourths of a pint to soak over night in a quart of water; in the morning drain and put to cook in cold water; skim when the water boils, cover closely, and simmer four or five hours. When the peas are tender, rub through

a colander to remove the skins. If the peas are very dry, add a little water to facilitate the sifting. While the peas are cooking cut in thin slices enough potatoes to make about one and a half pints, and put to cook in a small amount of cold water. When done put also through a colander and add to the sifted peas. With this put enough water or milk—the latter preferred—to make nearly or quite two quarts of soup. Return the soup to the fire, having added a small head of celery cut into short lengths, and let all simmer together ten or fifteen minutes. Then, having removed the celery with a skimmer, pour in a cup of thin cream and salt to the taste.—*Mrs. E. E. Kellogg, Battle Creek Sanitarium.*

BROWN SOUP.—Simmer together one quart of sliced potatoes and about one-third the quantity of thin shavings from the top crust of a whole-wheat loaf of bread in two quarts of water; when the potatoes are tender mash all through a colander; add a cup of well-cooked and sifted tomatoes and a little salt, and return to the fire. When hot, add half a cup of cream and serve immediately.—*Mrs. E. E. Kellogg, Battle Creek Sanitarium.*

BAKED EGGS.—Here is a new way of cooking eggs, which we have seldom seen in print: For a family of four take about six eggs; break with care, separating the whites from the yolks; beat the whites as if for frosting, and pour into a shallow dish, one that will do for the table and at the same time is not too good to be put into the oven for the baking. Now pour on the whites, here and there, a tablespoonful of sweet cream; each tablespoonful will make a little opening where one of the yolks must go. Put a yolk in the place without breaking it, and set the dish in the oven for baking; salt and pepper can be mixed with the beaten whites, or salt alone, and put the pepper on each yolk. When done it should be slightly brown. The tastes of consumers must decide how hard or soft the yolks must be.

POACHED EGGS.—Break your eggs into a teacup previously well buttered; stand the cup in a frying-pan of boiling water up to the middle; as soon as the white hardens it is done; put a knife gently around the edge and slip the egg onto a plate.

PICKLED EGGS for the table can be made to look beautiful by the following process: Boil the eggs hard, and then

drop them into cold water and remove their shells. Boil dark-red beets tender enough to jam, and cover them with cold vinegar, spiced with cloves, etc., salted and peppered. Pour this over the eggs, and in two or three days they will be of fine color.

SCALLOPED EGGS.—Chop cold meat of almost any kind till it is fine, and mix with bread crumbs, pepper, salt, melted butter, and a little parsley; then moisten milk to a soft paste; fill pattypans or small tin basins with the mixture, and break an egg on the top of each; dust with pepper and salt, sift fine cracker-crumbs over all, and place in the oven until the eggs are well set, perhaps seven or eight minutes. Bring to the table in the dishes in which they have been baked.

DROPPED EGGS.—Into a quart of boiling water put one tablespoonful of salt. A shallow iron frying-pan is the best dish to be used. Break the eggs one at a time into a saucer, and slide it into the water. Keep the water boiling if possible, and as soon as the white is firm lift the egg out with a griddle-cake turner. Have a slice of bread nicely toasted and buttered. Turning the slice around with the edge or crust just dipping into hot water, softens it sufficiently. Be sure to have a warm plate, fresh eggs, hot water, good butter, a little of which with a sprinkling of pepper must be put on the top of the egg; and a daintier dish for breakfast or supper can not be found.

JAM CAKE.—One cup of jam, currant, raspberry, or any other kind; one cup of sugar, one-fourth cup of butter, one and one-half cups of flour, three eggs, four tablespoonfuls of sour cream, one teaspoonful each of soda, cinnamon, and allspice. Stir together quickly, putting in the cream and soda last. If the jam is not thick, more flour may be needed. Bake in a loaf or in layers; if the latter plan is followed, put together with frosting made of one egg and one cup of powdered sugar. Boil sugar to a syrup, pour it over the beaten egg, and beat again thoroughly.

GOOD FRIED CAKES.—One cup of thick sour cream, two cups of buttermilk, and two cups of sugar; add two even teaspoonfuls of soda, a little salt, cinnamon, or nutmeg, if desired by the eaters; stir quite soft, and fry with care, quickly. Sifted sugar makes them a trifle nicer, and may be

put on while the cakes are hot. Drain them, and let them cool before putting finally away.

OLD-FASHIONED LOAF CAKE.—Two cups of sugar, one cup of sweet milk, one-half cup of butter, three eggs, three cups of flour, one teaspoonful of soda, and two of cream of tartar. Sift the cream of tartar and flour together, and add the soda to the milk.

PLAIN COOKIES.—Two eggs, two cups of sugar, one cup of sour milk, three-fourths of a cup of butter, an even teaspoonful of soda, and flavoring if desired. Mix very soft, and roll thin.

A GOOD THICK COOKEY.—One cup of sour cream, one and one-half cups of sugar, one egg, butter the size of an egg, a scant teaspoonful of soda, and flavoring to suit the taste. Mix very soft, and roll not very thin.

BAKED RICE PUDDING.—After washing a cupful of rice in three waters, put it into a dish that will hold two quarts and a half, and stir into it a teaspoonful of salt and one of cinnamon; then add three pints of milk and four tablespoonfuls of sugar. Bake slowly for two hours, stirring four times in that period. At the end of the two hours, add another quart of cold milk. Stir the pudding well, and bake an hour longer. Three tablespoonfuls of seeded raisins are an addition for many.

BOILED BREAD PUDDING.—Let one pint and a half of milk come to a boil, and pour it over three-quarters of a pint of fine bread crumbs. While this is cooling beat four eggs very light, add sugar to your taste, with a third of a cup of butter, a teacupful of currants, cherries, or raisins, and half a teaspoonful of grated nutmeg; then when the milk has ceased to be scalding add these to it, beat well together, and put it into a buttered tin pail, tie a cloth over the top, set it in a kettle of boiling water, and let it boil for an hour and a half. Have the tea-kettle on the stove, so that the water can be replenished, and the boiling of the pudding not for a moment suspended.

APPLE PUDDING.—A delicious pudding made of grated apples is especially enjoyed if the apples are tart and of good flavor. Grate the apples after peeling them, weigh them after grating, and put with them an equal quantity of white sugar. To about ten ounces of apples and sugar allow four well-beaten eggs, the rind of one lemon,

and the juice of two. Line a shallow pudding dish with biscuit crust or pie-paste, put in the apples, etc., and bake for half an hour in a hot oven. A sauce of cream adds a touch of unequaled goodness; but it is very nice without.

NICE APPLE PIE.—One cup grated or stewed sour apples, one cup sugar, and yolk of one egg. Bake with an under-crust and frost with boiled frosting of white of an egg and one-half cup of sugar.

PUMPKIN PIES.—Cut a solid pumpkin into quarters, remove all the seeds, and bake until soft. Pumpkin is much sweeter baked than stewed, and not so watery. When done scrape out all the meat and rub through a colander; to every quart of pumpkin put a quart of rich milk and a cup of rich sweet cream, two tablespoonfuls of molasses, and sugar to sweeten to your taste. Mix in a teaspoonful of salt, half a teaspoonful of cinnamon, one teaspoonful of nutmeg, two teaspoonfuls of ginger, and the yolks of three well-beaten eggs. Beat all well together, leaving no lumps of spice, and lastly add the whites of the three eggs beaten very stiff. Line a deep plate with rich paste, wet the edge, and lay two strips of the paste around; then fill with the pumpkin and bake till you can put a knife-blade in the center without its running.

SQUASH PIES.—Use two cups of squash, boiling hot (if the squash is cold it must be steamed till hot enough), and two cups of boiling milk. Stir well, and cool. Add a cup of cold milk, or one-half cup each of milk and cream, two eggs well beaten, sugar and salt to taste, and a little cinnamon. Bake with a rich under-crust. This quantity makes two pies.

FRUIT-JUICES FOR THE SICK (or the well).—Express the juice from the fruit as if for jelly; then heat, adding a cup of sugar to three pints of juice. Can, and keep as you do your fruit. Raspberry, strawberry, grape, cherry, currant, or even peach or plum juice, is excellent. With cold water, about equal parts, a very pleasant and harmless drink is prepared. These juices serve also as sour sauces for many sweet desserts.

ICE CREAM.—Three pints of cream, two of milk, one of sugar, two beaten eggs, and three teaspoonfuls of vanilla

or other flavoring. Mix and freeze *without cooking*.

FROSTED FRUIT.—Prepare a mixture of the frothed white of an egg and a little cold water. Dip carefully bunches of currants, cherries, grapes, or even as large fruits as plums, apricots, or peaches, into the mixture; drain nearly dry, and roll lightly in powdered sugar. Place on white paper to dry.

GOOD TEA.—In making tea the pot should be earthen, rinsed with boiling water, and left to stand a few moments on the stove to dry. Put in the tea-leaves, and let the pot stand a few moments longer. Pour on boiling water, leaving the pot standing where it will be at the boiling point, yet will not boil for from three to five minutes. For moderate strength use a teaspoonful of tea to half a pint of water. A good mixture of tea is made of equal parts of Oolong and Young Hyson.

Registration Laws.—Twenty-two States require general registration of voters; fourteen have only special laws applying to cities or smaller communities.

Religions.—The chief religions of the world may be classified by number of adherents about as follow: Christianity, 450,000,000; Confucianism, 390,000,000; Hinduism, 190,000,000; Mohammedanism, 180,000,000; Fetichism, 150,000,000; Buddhism, 100,000,000; Spirit-worship, 50,000,000; Shintoism, 22,000,000; Jews, 8,000,000; Parsees, 1,000,000. Total, 1,541,000,000.

Revolution, Patriot-troops in American.—Massachusetts, 169 per 1000 of population; Connecticut, 134; New Hampshire, 88; Rhode Island, 85; Pennsylvania, 59; New Jersey, 58; New York, 52; Maryland, 43; Delaware, 40; Virginia, 38; South Carolina, 25; North Carolina, 18. The low ratios of Southern States were due partly to their large populations of slaves, and better ratios appear on the 1000 of white population (of 1790)—Maryland 67, Virginia 61, Delaware 51, South Carolina 50, North Carolina 31.

Rings.—The memory-ring is merely a silver ten-cent piece rimmed out, with the milled edges left untouched. Usually it has a bangle attached, made of the inner part of the dime and bearing the monogram of the youth who has been inveigled into giving the girl the coin. When finished it costs less than \$1. Sometimes it is made double, the

two dimes being cemented together. For the friendship ring, a girl goes among the young men of her acquaintance and gets from each a little sum, a cent to a dime; and when she has laid tribute on all her friends, she buys a ring such as the proceeds of her work will purchase. Or she limits all contributions to a single penny, and stops when she gets an even hundred.

Rivers, the Longest.—Mississippi, 4300 miles; Nile, 4100; Amazon, 3750; Yenesel, 3400; Yang-tse-kiang, 3300; Niger, 3000.

R's, the Three.—The origin of these is believed to be in the following queer old-time hand-bill, issued near Lancaster, Eng.:

James Williams, parish clerk, sextone, town crier, and bellman, makes and sells all sorts of haberdasheries, groceries, &c. likewise hair and wigs drest and cut on the shortest notice. N. B.—I keeps an evening school, where I teach at humble rates reading, riting, and rithmetic, and singing. N. B.—I play the hooboy occasionally, if wanted. N. B.—My shop is next door, where I bleed, draw teeth, and shoo horses, with the greatest scil. N. B.—Children taught to dance, if agreeable, at 6d. per week, by me, J. Williams, who buy and sell old iron and coats—boots and shoes cleaned and mended. N. B.—A hat and pr. of stockens to be cudgelled for, the best in 5, on Shrof Tushday. For particulars inquire within, or at the horse-shoe and bell, near the church on t'other side the way. N. B.—Look over the dore for the sign of the 3 pidgeons. N. B.—I sells good ayile, and sometimes cyder. Lodgings for single men. N. B.—I teaches jografy, algebray, and them outlandish Kind of things. A ball on Wednesdays and Fridays.

St. Aloysius (Catholic) Church, No. 34 Washington ave., Detroit, dedicated 1873, has seating capacity of about 900; value of property, including lot 120 by 100, about \$70,000. Membership, 250 families. Services Sunday at 8, 10:30 and 7:30, every day at 8 A. M. The Reverend Ernest Van Dyke, pastor, is a native of Detroit, born Jan. 29, 1845;

graduated and was medallist at Fordham, N. Y.; studied in Rome 1864-68, and was there ordained Priest 1868; served the church in Adrian three years, and St. Peter and St. Paul's, Detroit,

one year, and in 1873 was appointed to his present pastorate. Residence, 36 Washington ave.

St. Barnabas Church, Detroit, is among recent Episcopal foundations here, and occupies a neat frame chapel on Harper ave. Sunday morning services, and arrangements are making for evening services also. The Rev. Chas. A. Cary, Rector, was born in Buffalo, N. Y., March 21, 1843; ordained to the diaconate in Christ church, Detroit, May, 1874, and also to the priesthood June, 1875; was the first assistant minister ever serving that parish, subsequently ministered to several parishes in the South, and near the close of 1889 took charge of this church and of St. Stephen's church, Wyandotte.

St. James' Church, Episcopal, Seventh and Bagg sts., Detroit, was a mission of St. John's, begun 1869; present building erected 1876, brick, and cost about \$16,000. Communicants, 350; souls in parish, 750; Sunday-school, 300. Services Sunday 9:15 (communion), 10:30, and 7:30; Friday, 7:30; communion all holy days. Vested choir, in charge of Mr. S. T. Warner. The Rev. S. W. Frisbie, Rector, was graduated at Racine College, and Nashotah Theol. Sem., ordained by Bishop Kemper, and came to St. James' Feb. 1, 1880.

St. John's Church, P. E., Woodward ave. and High st., Detroit, built its stone chapel 1859, and its fine church the next year. Sittings, 1068 and 350. Rectory added 1860, and church-house 1889. Total value of property, \$175,000. Seats in church rented and free in chapel free. Rectorate vacant; Assistants, Rev. E. M. Jefferys, Rev. W. W. Wilson; St. Mary's mission, Antoine and Benton, Rev. Douglas Hooff. Communicants St. John's, 1053; St. Mary's, 163; total, 1221. Sunday-schools, 707 and 366; total, 1073. Parochial societies, 13 and 2. Sunday services: Communion 8 A. M. Nov. to May, 7:30 May to Nov., and 10:30 first Sunday in month; morning prayer and sermon, 10:30; evening at 7:30; Sunday-school and Bible-classes in parish building, 2:30. Week-day services, in chapel: Wednesday, service and lecture, 7:30; Friday, morning prayer and litany, 9; Holy days, communion 9, evening prayer 5. Reading-room in parish building open and free to 10 every evening. Services at St. Mary's: Communion 2d Sunday of



REV. E. VAN DYKE.

month 10:30, and 4th Sunday 7:30 A. M.; morning prayer and sermon, 10:30; evening, 7:30; Wednesday evening, prayer and lecture, 7:30.

St. Matthew's P. E. Mission, Antoine and Elizabeth sts., organized as a Diocesan Missionary Guild in 1880. First

sermon by the Rev. Paul Zeigler, and faithful ministrations afterwards until Easter Sunday, 1890, when the Rev. Chas. H. Thompson, D. D., late of Vicksburg, Miss., began service as Rector. Sit-



REV. CHAS. H. THOMPSON.

tings in chapel, about 300; in guild-house, 75; value of church property, \$13,500; all seats free. Holy Communion every Sunday at 7 A. M.; services at 10:30 and 4; Sunday-school, 2:30; evening prayer and lecture Wednesday, 7:45. Dr. Thompson is a native of Pittsburg, graduate of Oberlin College and Theol. Sem., Presbyterian minister 12 years and D. D. by grace of Princeton College, ordained Deacon in Episcopal Church, New Orleans, La., in 1877 and Priest 1879, called to St. Mary's Church, Vicksburg, early in 1889, and accepted call to St. Matthew's Jan., 1890, holding his first service with it April 6.

St. Paul's Church, P. E., Congress and Shelby sts., Detroit, organized Nov. 22, 1824; Aug., 1827, laid corner stone

at Woodward ave. and Congress st.; 1852, occupied present structure at Congress and Shelby. Seating capacity, 900; value of property, \$100,000; communicants 800, representing 555 families, Sunday-school 600. Sunday services 9, 10:30,



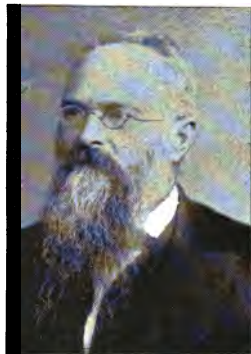
REV. R. W. CLARK.

and 4. Rev. Rufus W. Clark, D. D., Rector; Rev. Warren Hastings, B. D., Assistant. Dr. Clark was born May 29, 1844, at Portsmouth, N. H.; was graduated at Williams College 1865, and General Theol. Sem. 1868; ordained same year by Bishop Clark of Rhode Island; became Rector of St. Paul's Sept. 1, 1877. Residence, 767 Woodward ave.

St. Paul's United Evangelical (German)

Church, Seventeenth and Rose sts., Detroit, is a branch of St. John's U. E.

church, formerly on Monroe ave., now on Russell st. Its house of worship was built 1872-73, and consecrated Feb. 16, 1874, seats 700; property value, \$25,000; membership, 800. Sunday services 10:30 A. M. and 7:30



REV. J. G. HILDNER.

P. M., and Wednesday service 7:30 P. M. Sunday-school at 9:00 A. M. Rev. J. G. Hildner, pastor, was born Feb. 6, 1837, at Syra, in Greece; was ordained Aug. 7, 1859, at Mannheim, Germany, and took charge of St. Paul's Feb. 16, 1873. Resides at No. 380 Seventeenth st.

SS. Peter and Paul Church (R. C.),

Jefferson ave., Detroit, is in charge of the Jesuit Fathers and connected with Detroit College. Its

corner stone was laid 1844 and it was used as cathedral until June, 1877, when it was transferred to the Fathers. Sittings, 1000; value of property, including pastoral residence, \$120,000.



REV. M. P. DOWLING.

spiritual care of 500 families, or about 2500 souls. Sunday services: Low masses at 5, 6, 7, and 8:30 A. M., high

mass with sermon at 10:30, vespers 2:15, baptisms 2:30, benediction and lecture 7:30; week-day masses at 5, 5:30, 6, 6:30, 7, and 8:30 A. M. Rev. M. P. Dowling, pastor of the church and Rector of Detroit, College was born in Cincinnati June 14, 1851, entered the Society of Jesus 1869, studied at St. Xavier College, Cincinnati, Woodstock College, Md., St. Stanislaus Seminary, Florissant, Mo., and elsewhere; taught at St. Xavier, St. Louis University, and Detroit College; was President of Creighton College, Omaha, where he established an observatory and St. John's Collegiate church, of which he was made Rector in 1887; and became Rector here in March, 1889. Residence, Detroit College; accessible at all hours.

St. Stephen's Church (P. E.), St. Aubin and Mullett sts., occupies the former German Baptist church, which was purchased and enlarged in 1888. Seats, 350; value, \$8000; membership, 210. The parish was founded in 1869, the Rev. E. A. Lightner presenting the lot upon which its first church edifice was built, on Catherine st. Christ church assumed the care of the mission in 1883, after which it grew rapidly, and has lately become independent. The Rev. John Munday, late Rector, is now at Alpena, and his successor is the Rev. E. Collins, late of Bad Axe, Mich.

St. Vincent's Church (R. C.), Fourteenth ave., Detroit, was built in the middle 60's, and \$10 000 addition made 1888, St. Vincent's School costing \$50,000, being built the year before. The school had 16 teachers and 1050 pupils last year; membership of parish 4000 or 1050 families; sitting in church 1200; value of property, \$124,000.



REV. JAS. G. DOHERTY.

Mass on Sundays 6:30, 8:00, 9:15, and 10:30 A. M., baptism 2:00, Sunday-school 2:30, vespers 3:00; week-day mass, 6:30 and 8:00 A. M. Rev. Fr. James G. Doherty, pastor, was born in County Tyrone, Ireland, studied and was ordained Priest in All Hallows'

Seminary, Dublin, June 26, 1876, came to Detroit same year and was Assistant Pastor at SS. Peter and Paul, then pastor at Brighton, Osceola, and Howell, came to St. Vincent's July 4, 1886. Residence, 280 Fourteenth ave.; calls at any time, but best at 9, 1, and 7 o'clock.

Salaries.—The presidents of the New York Central and the Canadian Pacific railways are each paid \$50,000 a year, as much as the President of the United States receives. No minister of the Gospel in this country is known to receive more than \$16,000 a year, and but one to have that.—Rev. Dr. W. M. Taylor, of New York. In the same denomination (Congregational), Drs. R. S. Storrs, Lyman Abbott, and A. J. F. Behrends, of Brooklyn, have each \$10,000 a year. Dr. Gunsaulus of Chicago gets \$8000, and Dr. Gregg of Boston \$7000.

Salvation Army.—Reports to the Inter-State Congress of the Salvation Army, held in New York City last November, show that it then had 445 corps and outposts in the field in this country, employing about 1125 officers. During October, 1890, 1,071,000 persons attended its in-door meetings alone. The value of property held by so large and active a body in the United States is only \$35,000, but the Army has a total property in all lands worth \$3,250,060, more than half of it owned in Great Britain.

Sand-painting.—A Parisian artist displays wonderful skill in painting in sand. With plates of various colored sand before her, she takes the sand in her right hand and causes it to fall in beautiful designs upon a table. A bunch of grapes is pictured with violet sand, a leaf with green, the stalk with brown, and relief and shadows by other sands, when the work is brushed away, and a bouquet of roses and other objects is represented with the same dexterity and delicacy. Lines are drawn by the stream of sand as distinct as though made with an artist's brush.

Sayings.—A correspondent gives another origin for the saying, "As dead as a door-nail" (see Year-book for 1890, page 42), as referring to the wooden peg put into base-boards for the door to strike against when thrown open. He asks, "What could be deader than a door-nail thus pounded for years?"

Sand-bags.—The sand-bag is invaluable in the sick room. Get some clean,

fine sand, dry it thoroughly in a kettle on the stove, make a flannel bag about eight inches square, fill it with dry sand, sew the opening carefully together, and cover the bag with cotton or linen. This prevents the sand from sifting out, and enables one to heat the bag quickly by placing it in the oven or on top of the stove. After once using this you will never again attempt to warm the feet or hands of a sick person with a bottle of hot water or a brick. The sand holds the heat a long time, and the bag can be tucked up to the back without hurting the invalid. It is a good plan to make two or three of them, and keep them on hand, ready for use at any time when needed.

Schmiedharnuss.—This formidable name is given to a new metal, composed of pig- and wrought-iron, aluminium, copper, bronze alloy, and a flux. It is produced direct from the cupola without annealing, yet can be welded and hammered like iron or steel, and can be manufactured, it is claimed, at a less cost than malleable iron or steel castings. Marvelous properties are attributed to it, and at a test made in Louisville it is said to have endured a tensile strain of 168,000 pounds per square inch, which was the limit of the machine.

School Law.—Act No. 147 of the Michigan Legislature of 1889 provides for the adoption of free text-books by any school district in the State. All districts, except in cities under special charter, are required at the first annual meeting after the passage of the act to authorize the district board to purchase and provide free text-books for the use of the pupils in the district. Further action may be taken on the question at any subsequent meeting. After a district has voted favorably on the adoption of the text-books, the board shall estimate and report for assessment the amount necessary to purchase books, and the board shall contract with some dealer or publisher of books to furnish the books used in the district. Officers refusing or neglecting to carry out the provisions of the law after it has been favorably voted on by the district, shall be guilty of misdemeanor, and may be punished by a fine or imprisonment, or both.

Sea-level, land areas below : Shore of Caspian Sea, 86; Sirrah, in Lybia, 123; Arroyo del Muerto, Cal., 230; Conchilla Valley, near Los Angeles, Cal., 273; Lake Asal, East Africa, 639; Dead Sea district, 1289.

Second - ave. Presbyterian Church, cor. Gilman st., near Grand River ave., Detroit, was organized as a United Pres. church May 8, 1853, and in Sept., 1855, bought from First Pres. church the building occupied until recently at Lafayette ave. and Wayne st. The church became an American Presbyterian shortly before occupying its fine new edifice, which was dedicated April 14, 1889. Sittings, about 800; value, about \$60,000. Membership, 365. Sabbath services 10:30 and 7:30; Sabbath-school at noon; Y. P. S. C. E., 6:30; Young People's Society third Tuesday evening each month. Public cordially invited. Rev. Dr. Richard Turnbull, pastor, was born in Roxburghshire, Scotland, ordained Nov. 13, 1867, began regular work with this church Oct. 1, 1878, and was installed Nov. 21, same year. Residence, 395 Second ave.



REV. R. TURNBULL.

Second German M. E. Church, Detroit, was organized in 1857, and its present edifice erected one year later, east side of Sixteenth st., near Dalzell. Services Sundays at 10:30 and 7:30; Sunday-school at 9; Epworth League Tuesday, 7:45; prayer-meeting Thursday, 7:45. Membership, 225. In 1882 a mission chapel was erected on Thirty-second st., and a Sabbath-school is maintained there every Sunday at 2:30. The present pastor, J. Kern, has served the church since Sept., 1887.

Sects.—There are 189 religious sects in the United States, and 185 in England.

Seed to the Acre.—Wheat $1\frac{1}{2}$ to 2 bushels; barley, $1\frac{1}{2}$ –2½; oats, 2–4; rye, 1–2; buckwheat, $\frac{3}{4}$ –1½; millet, 1–1½; corn, $\frac{1}{2}$ –1; beans, 1–2; peas, $2\frac{1}{2}$ –3½; hemp, 1–1½; flax, $\frac{1}{2}$ –2; rice, 2–2½; broom corn, 1–1½; potatoes, 5–10; timothy, 12 to 24 quarts; mustard, 8–20; herd grass, 12–16; flat turnip, 2 to 3 lbs; red clover, 10–16; white clover, 3–4; blue grass, 10–15; orchard grass, 20–30; carrots, 4–5; parsnips, 6–8; asparagus seed, 1 oz. produces

1000 plants and requires a bed 12 ft. square; asparagus roots, 1000 plants a bed 4 ft. wide and 225 ft. long; English dwarf beans, 1 quart plants from 100 to 150 ft. of row; French dwarf beans, 1 quart plants 250 to 350 ft. of row; beans, pole, large, 1 quart plants 100 hills; beans, pole, small, 1 quart plants 39 hills or 250 ft. of row; beets, 10 lbs. to the acre, 1 oz. plants 150 ft. of row; broccoli and kale, 1 oz. plants 2500 plants, and requires 40 square ft.; cabbage, early sorts same as broccoli, and require 60 ft.; cauliflower, same as cabbage; carrot, 1 oz. to 150 of row; celery, 1 oz. gives 7000 plants, and requires 8 ft.; cucumber, 1 oz. for 150 hills; cress, 1 oz. sows a bed 16 ft. square; egg plant, 1 oz. gives 2000 plants; endive, 1 oz. gives 3000 plants, and requires 80 ft.; leek, 1 oz. gives 2000 plants, and requires 60 ft.; lettuce, 1 oz. gives 7000 plants, and requires seed-bed of 120 ft.; melon, 1 oz. sows 120 hills; 1 oz. of nasturtium sows 25 ft. of row, of onion 200, okra 200, parsley 200, parsnip 250, pepper gives 2500 plants; 1 oz. of pumpkin to 150 hills, of radish to 100 ft. of row, salsify 50 ft., spinach 200 ft.; squash, 1 oz. to 75 hills; tomato, 1 oz. gives 2500 plants, requiring seed-bed of 80 ft.; turnip, 1 oz. to 2000 ft.; watermelon, 1 oz. to 50 hills.

Shiloh Baptist Church (colored), 302 Columbia st. east, Detroit; membership 27, Rev. L. Auger, late pastor, was born at St. Pie, P. Q., Canada, June 30, 1827, of French parentage, was educated at Grande Ligne Mission, labored for three years with Dr. Cote of that mission and nine years elsewhere in Canada as missionary, also 18 years at Ste. Anne, Ill., and 5 years in Stryker, O., and came to Detroit April, 1883, where he has since been mainly engaged in city mission work. He recently resigned his pastorate, and was succeeded in Dec., 1890, by Rev. W. A. Meredith, of Gallipolis, O.

Ship Canal, the Nicaragua.—Work was formally begun upon this Oct. 22,

1889, and is in active progress. The canal will cross Nicaragua from Greytown, on the Caribbean Sea, to Brito, at the mouth of the San Juan del Sur, on the Pacific, 169.8 miles, of which only 28.9 miles will be canal proper, Lake Nicaragua and other inland waters being utilized for the rest. Estimated cost \$64,000,000, including electric lights and railroads for transporting supplies; to be finished in 1895.

Ship Railway.—One is building in Nova Scotia, to connect Northumberland Strait with the Bay of Fundy, 14 miles long, to carry vessels without breaking cargo. The ship canal projected here two generations ago was found impracticable, from the violent high-tides in the Bay and consequent immense mud deposits. The Dominion Government gives liberal pecuniary aid.

Simpson M. E. Church, corner Trumbull ave. and Sixth st., was built in 1868, seats 800, and is valued at \$50,000.

Memberships.—Largest in Detroit Conference. In the past four years it started three successful missions, one becoming the Arnold M. E. church. In ten years it has had over 600 conversions. Sunday services 10:30 and



REV. M. C. HAWKS.

7:30; general prayer meeting 7:30 Wednesday; young people's meeting 7:30 Friday. Everybody welcome to all. Pastor M. C. Hawks was born in Wheeling township, Cook Co., Ill., Aug. 18, 1851, entered ministry Sept., 1878, joined Detroit Conference 1879, and was appointed to this church Sept., 1887. Residence, 418 Sixth st.; can be seen Monday afternoons and other days 12 to 2 and 5 to 7.

Snow-lines, Height of.—In Greenland, 2300 feet above the sea; Alps, 9000; Caucasus, 11,000; Rocky Mountains, 14,000; Popocatepetl, 14,900; Himalayas, 17,000. The limit of perpetual snow on the equator is 15,207 feet; at 60° of latitude 3818, and 75° 1010.

Smith, Sergt. James P., winner of the DETROIT JOURNAL Marksmanship



REV. L. AUGER.

Medal at the State Encampment in Battle Creek, Aug., 1890, is a member of Company D, Second Regiment, and resides in Three Rivers. He was born in Niagara Co., N. Y., July 19, 1846, came to Michigan in childhood with



his parents and settled in Branch county, where he remained until 1880, then removing to Three Rivers. He has been connected with the State militia about eight years, always taking a lively interest in the improvement of marksmanship; but that feature of the service having been neglected of late years, he has had but little rifle practice. He was in the company's rifle-team in 1884 and enjoyed one season's practice, his entire experience, except for about three weeks before the last Encampment. He is a machinist, and so expert with tools that he can make anything from a locomotive to a watch. He is now, however, keeping a variety store, and doing a thriving business. He has been married some 25 years, and two generations now pay him reverence, as the result of a happy union.

Soldiers' Home.—National soldiers' homes have been founded at Washington, D. C. (1851, for regulars); Central, Dayton, O.; Northwestern, Milwaukee, Wis.; Western, Leavenworth, Kan.; Pacific, Santa Monica, Cal.; Southern, Hampton, Va.; Eastern, Togus, Me.; and a new one at Marion, Ind. There are State homes at Yountville, Cal.; Noroton, Conn.; Quincy, Ill.; Marshalltown, Io.; Chelsea, Mass.; G and Rapids, Mich.; Minnehaha Falls, Minn.; Grand Island, Neb.; Kearny, N. J.; Bath, N. Y.; Sandusky, O.; Erie, Pa.; Hot Springs, S. D.; Bennington, Vt.; and Waupaca, Wis. Confederate soldiers' homes are supported, mostly by private contributions, at Richmond, Va.; Pikesville, Md.; New Orleans, La.; and Austin, Tex. Some of the Southern States have provided

small pensions for disabled Confederates.

Soldiers' Societies.—[For those in Michigan, see Appendix.]

Sons of the American Revolution—This organization, which admits to its membership any male descendant of Revolutionary ancestry, has a national delegated organization, with Dr. William Seward Webb, of New York City, as president-general, and tributary, State societies, in each State. The officers of the Michigan society, organized January 18, 1890, are as follow:



President, Hon. H. B. Ledyard, Detroit; secretary, Mr. Frederick T. Sibbey, Detroit; registrar, Silas Farmer, Detroit. The next meeting of the Michigan society will be in Detroit, Feb. 22, 1891. This patriotic organization began in California July 4, 1876, when a State society was effected. This was followed, on Dec. 4, 1883, by a State society in New York. Later still, organizations were created in New Jersey, Pennsylvania, and the District of Columbia. Finally, on April 30, 1889, upon the occasion of the Washington Centennial Celebration in New York City, delegates and representatives from twelve States met at 9 A. M. at Fraunce's Tavern, where Washington made his farewell address, and effected a national organization, to be composed of delegates from all the States. Since that time, societies have been organized in nearly every State of the Union. The object of the society is purely patriotic and non-partisan. The accompanying illustration is that of the badge of the order.

Soul.—A Philadelphia doctor now locates the soul in the corpus callosum, a small spongy body at the base of the brain, which has defied the efforts of physicians to ascertain its uses in the human anatomy. He says it "is the seat of the imperishable mind, and is the great reservoir and storehouse of electricity, which is abstracted from

the blood in the arteries, and conveyed through the nerves up the spinal cord to the corpus callosum."

Sound.—One of the most wonderful discoveries within the last year or two is that a beam of light produces sound. A beam of sunlight is thrown through a lens on a glass vessel containing lamp-black, colored silk or worsted, or other substance, and a disk having slits or openings cut in it is made to revolve swiftly in the beam of light, so as to cut it up, thus making alternate flashes of light and shadow. On putting the ear to the glass strange sounds are heard, so long as the flashing beam is falling on the vessel. If the light be passed through a prism, no sound is heard. A green light thrown on red worsted produces the loudest sound.

Speed.—Two torpedo-boats have been built, one for the English, one for the Italian Government, that move with the amazing speed of 27 knots, or nearly 31 miles, per hour. This is the utmost that has been got out of wood (or any other material) on water.

Speed of Trains can be ascertained with reasonable nearness by counting the number of clicks in 20 seconds, each click indicating the passage over a rail. About 180 rails are laid to the mile, and $\frac{1}{3}$ of a minute is 1-180 of an hour. Hence, if 20 clicks are heard in 20 seconds, the train is traveling a little more than 20 miles an hour; if 25 are heard, 25 miles; and so on. Railroad men themselves use this rule.

Speed, Relative.—A German scientist has recently computed that a snail moves .0015 metre in a second; man walking, 1.25 metres; on snow-shoes, 2.95; as sprinter, 7.1; swiftest river, 4; balloon in calm, 6.4; fast steamboat, 8.5; fresh breeze, 10; torpedo-boat, 11.5; very fast skater, 11.6; running race-horse, 12.6; mountain torrent, 14.3; express train, 16.7; ocean wave, 21.8; carrier-pigeon, 27; swallow, 67; heavy cyclone, 116; sound, 337; equatorial point, 463; cannon-ball, 500. In the same time the moon travels one kilometre; explosion of gun-cotton, 5.8; the sun, 7.6; Sirius, 15.4; earth 29.5; average shooting-star, 40; Halley's comet near sun, 393; storm on sun, 402; cable current, 4000; telegraphic current, 11,690; induction current, 18,400; light, 300,000; discharge of Leyden jar on copper wire 1.7 millimetre in diameter, 463,500.

Sporting.—[See Appendix for statistical tables.] The year which has closed will go down into sporting history as one of the most fruitful and startling ever known, and will be quoted as the year of strange happenings in all lines.

In the first place the national game, base ball, received a set-back such as never occurred before in its history. The National League had what at first sight seemed a dangerous enemy. The sport languished, interest died out, and at the first blush the insurrectionists called the Brotherhood seemed to be on the top wave of popularity. The fight ended by the virtual surrender of the Brotherhood and the loss of big sums of money to all interested. The causes which led up to the revolt and the reasons why it failed are so many and apparent that they need not be given here. It was a year of fate for the game, which has grown and flourished since early in the 70's, and it is at this time doubtful if it recovers its old-time supremacy for a long time, if at all. John Ward, the leader of the revolt, made a name for himself out of it, but the players who enlisted under the banner he raised may, many of them, never regain lost ground. The move is everywhere admitted as ill-advised and harmful to the interests of the game.

Outside the disruption in the great League it was a bad year for the lesser Leagues, the International, of which Detroit was a member, having struggled for a living until July and then thrown up the sponge in disgust. The Michigan State League went the way of the International, and at the close of the year for the first time since 1881 there was neither League representative nor interest in Michigan.

In turf circles the record has been one of wonder even to the old patrons. New horses have come to the front, and a surprising number of record-breaking performances on both the trotting and running track have been witnessed. The Detroit Driving Club, under President Campau, inaugurated the grand circuit season with purses that amounted to \$50,000, the largest ever offered, and the result was the fastest meeting ever held in Detroit. In almost every event the time was faster than anybody expected. The sensational performance of the meeting was the exhibition mile of the California Filly Sunol, who made the half-mile in 1:02. Another record broken at this meeting

was in the amount of money offered, \$25,000 in purses and added money being paid in one day at the meeting, the largest sum ever given in one day at any trotting meeting. A week after the regular meeting the great match race between Jack, the handsome gray, and Palo Alto, the California marvel, occurred, and the time made was the fastest ever trotted in a race on any track. Jack lowered his record at the time, and Palo Alto although beaten made a great showing. On foreign fields the sensational performances have been so many and varied that room is not given for their consideration here; but full records will be found in the sporting appendix which was prepared especially for the JOURNAL.

In no branch of sport have there been such great strides made as in amateur athletics. Under the fostering care of the Amateur Athletic Union of the United States clubs have sprung up everywhere, exhibitions have been attended by immense crowds, and the results of games and sports watched with interest. One of the greatest meetings ever held was that at Washington in October, where John Owen, jr., a member of the Detroit Athletic Club, won the honorable title champion 100-yard sprinter of the world, and Fred T. Ducharme showed his heels to the famous athletes of the country in the 120- and 220-yard hurdle contests, and became champion hurdler of the country. In these contests the Detroit Athletic Club has played a very prominent part and justified the prediction made some years ago that it would become one of the leading clubs in the country. While in point of membership it has not surpassed the Eastern clubs, which admit anybody that will come,—the Detroit Athletic Club being very particular in the matter of electing new members,—it has become very widely known and was selected to hold the great contest of the West, a contest which was remarkable in many ways, but in which the records were not badly broken. John Owen, of all the the members of the club the most prominent, is practically a new man at athletics, and a few years ago was unknown. As early as last year he became famous for his work at the Traverse Island, N. Y., and at Toronto, and there were many who prophesied that he would yet beat the great record for the 100 yards, a prophecy which he has fulfilled.

John Owen, jr., amateur champion 100-yard runner of the world, Western champion 220 and 440-yard runner, champion of Canada for both 100 and 220 yards, and the holder of innumerable championships, medals is a native Detroiter, having been born in 1861 at No. 61 Fort street west, where he now resides with his parents.

In personal appearance he is strong and active, standing 5 feet 8½ inches tall and weighing 130 pounds. Until 1889 he had no idea of entering the athletic arena, but early in April that year began to train and surprised everybody by winning the 100-yard handicap at the D. A. C. games in April. At the championship meeting which was held in Detroit in June he gave Carey a hard battle



JOHN OWEN, JR.

in the 100 and 220, and made a great showing. A little later he had a walk-over in the Pittsburg handicap games, and then won every event in which he was entered at Chatham. In August at the D. A. C. games he ran the 100 in 9½ sec., but did not claim the record nor that of 21½ for the 220, as a strong wind was blowing at the time. He first gained national note by his work at Traverse Island, N. Y., where he defeated Carey, Westing, Copeland, King, and other noted Eastern athletes, winning the 100-yard race in 10½ on a very heavy track. He still further increased his fame at the same meeting by winning the 220 in 23½. He next ran second to Corcoran of New York, at Toronto, after the referee had cheated out of his chance by setting him back. At the Western championship meeting

held in Detroit in June he lost the 100-yard race to Jewett, being out of condition, but won the 220 in 23 and the 440 in 52, for both of which performances he holds the Western championship. He next made a great run at St. Louis, where he captured the 440-yard race, although heavily handicapped. In Cleveland, Montreal, and at the Detroit track later in the season, he defeated all comers. It was at Washington that he made his great race, where he not only defeated Carey, Westing, Robinson, and Remington, but beat the world's record of ten seconds by $\frac{1}{4}$ of a second, and would have won the 220, but it had a turn and he could not make the turn. He now holds the world's 100-yard record with 9 $\frac{1}{4}$, the 220 Western championship with 22 $\frac{1}{4}$, and the 440 Western championship with a record of 52 seconds, and the Canadian championship for 100 and 220. He has also equaled the world's record on the 150 at 14 $\frac{1}{4}$. Owen is engaged in real estate business in this city with his father, and will now devote his attention to lowering the quarter-mile record.

Stamps, Postage.—It is estimated that 13,000 kinds of stamps have been made, but only some 6000 are now in use. The Museum of the Berlin Post-office has 4000 to 5000 specimens, about half of them European. The emblems upon stamps are legion: the earth, the sea, and the vaulted canopy have been ransacked for curious and meaningless devices and legends, with the entire animal kingdom, the stars, and the moon in all its phases, besides legendary emblems by the thousands. Upon the tinted, printed faces of these little squares are found the effigies of five emperors, eighteen kings, three queens, one grand-duke, several interior rulers, and many presidents. The new U. S. 1-cent stamps bear the head of Franklin, in ultramarine-blue; 2-cent, the profile bust from Houdon's Washington, in carmine; 3-cent, the profile bust of Jackson, after Powers, in purple; 4-cent, Lincoln, chocolate; 5-cent, Grant, light-brown; 6-cent, Garfield, vermilion red; 10-cent, Webster, milori-green; 15-cent, Clay, deep-blue; 30-cent, Jefferson, from Ceracchi's profile bust, black; 90-cent, Com. Perry, profile bust from Walcott's statue, orange. All are in medallion, with heavily shaded background and ornamental frame.

State Agricultural Society.—This was incorporated March 31, 1849, and

has had a generally successful career of 42 years. Its officers at present are: President, Hon. John T. Rich, of La peer; Secretary, Samuel Johnson, Lansing; Treasurer, C. W. Young, Paw Paw. Executive Committee—terms expire Jan., 1892: Eugene Field, Bay City; John Cole, Fremont; Jas. A. Green, West Detroit; M. J. Gard, Volinia; L. W. Barnes, Byron; W. P. Custard, Mendon; J. Q. A. Burrington, Tuscola; M. P. Anderson, Midland; C. E. Lockwood, Washington; C. W. Young, Paw Paw. Terms expire Jan. '93: Wm. Ball, Hamburg; A. B. Taylor, Jackson; F. M. Reed, Olivet; N. J. Kelsey, West LeRoy; H. R. Dewey, Grand Blanc; I. H. Butterfield, Port Huron; John Lessiter, Cole; H. H. Hinds, Stanton; J. P. Shoemaker, Amsden; J. Hart Smith, Somerset. Ex-officio members, as ex-Presidents of the Society: M. Shoemaker, Jackson; Chas. Kipp, St. Johns; E. O. Humphrey, Kalamazoo; W. L. Webber, East Saginaw; Geo. W. Phillips, Romeo; Henry Fralick, Grand Rapids; Philo Parsons, Detroit; Wm. Chamberlain, Three Oaks; A. C. Hyde, Marshall; Thomas W. Palmer, Detroit; James M. Turner, Lansing. Presidents elected hereafter do not become ex-officio members. The annual fairs of the Society are held at Lansing, usually on five days in the first half of September.

State Mottos.—Those upon the seals of the new States are: North Dakota, "Liberty and Union, now and forever, one and inseparable"; South Dakota, "Under God the people rule"; Montana, *Oryz Plata*, "Gold and silver"; Washington, *Al-Ki*, meaning "by and by" or "in the future"; Idaho, *Salve*, "Welcome"; Wyoming, *Cedant arma togæ*, "Let arms yield to the gown" (the military to the civil power).

States, Nicknames of.—In addition to those given in our first Year-book, we now have the following: Georgia, Empire of the South; Kansas, Garden of the West, Sunflower or Jayhawker State; Kentucky, Blue-grass State; Massachusetts, the Old Colony; Minnesota, Gopher or North-star State; Tennessee, Big Bend; Virginia, Old Virginia; West Virginia, the Panhandle. Four of the new States are locally entitled Flickertail State (North Dakota), the Swinge-cat State (South Dakota), the Stubbled-toe State (Montana), and the Chinook State (Washington).

Statues, Cost of Ancient.—Colossus of Rhodes, \$225,000, or \$510,000, by a

more probable reckoning; Colossus of the Sun, in the Capitol at Rome, \$625,000, figuring on the Attic talent; colossal statue of Mercury, by Zenodorus, \$1,675,000; the Diadumenos of Polycleitus, about \$125,000. A single golden lock on the head of the Olympian Zeus was worth nearly \$25,000, and the gold on the movable drapery of the Athena in the Parthenon about \$580,000.

Steam Power.—The aggregate power of all steam-engines in the world is calculated to equal the working force of one billion men, or more than double the working population of the globe.

Stitches.—Careful calculation of the number of stitches in a plain hand-made shirt gives the surprising total figure of 20,649.

Stones, Some Queer.—The eye-stone comes from a small South American sea-shell, and is so called because the natives use it to remove intruding substances from the eye, and it is also exported to some extent for the purpose. It will move about as if alive, if placed in any weak acid. The lucky-stone is found back of the eye of the sheep's head, a fish sometimes caught in the waters of Lake St. Clair and elsewhere, and is believed to bring good luck to the owner of it.

Street-cars.—The longest street-car line in the world is in the Argentine Republic, 200 miles, connecting a number of towns with Buenos Ayres. It serves the purpose of an ordinary railroad, even running a curious sort of sleeping-car; but the motive power is from horses only, as horses are cheap and fuel for steam is dear.

Strychnine.—A single grain of this subtle substance will give perceptible flavor to 1,750,000 grains of water, in each of which the exceedingly small fraction of the poison which occupies it can be distinctly tasted.

Suicide, Statistics of.—The yearly number of suicides to the million of population in France increased 1840-75 from 76 to 150; Prussia, 103 to 134; Saxony, 158 to 299. In less than 30 years the rate in Massachusetts grew by nine per cent, or to 82 in the million. Suicides predominate in Central Europe between 47° and 57° north latitude and 20-40° longitude, the rate diminishing on any side of this area. The minimum is reached in Italy and the maximum in Saxony, which is attributed to difference of race rather

than climate. Suicides occur oftener in plains and flat countries than among mountains, and in summer than in winter. A constant relation appears between suicides and the length of the day, their number increasing steadily from December to June and declining from June to December. More men than women commit suicide, in the ratio of three or four to one. It is greater among unmarried than married adults, and among widows than widowers. More men destroy themselves on Thursday than on any other day, and more women on Sunday. Hanging is the favorite method, followed by drowning, shooting, stabbing, and poison, in the order named.

Sunday-schools, Statistics of.—Statistics submitted to the International Convention at Pittsburg in June, 1890, showed for the United States 108,252 Sabbath-schools, with 1,143,190 teachers and officers, and 8,643,255 pupils. Nine States and the District of Columbia have every county organized for S. S. work, and 1557 out of 2630 counties are so organized. Michigan's schools were estimated at 3500, with 37,800 teachers and officers and 277,200 pupils, 60 fully organized counties and 5 "banner" counties, or those in which every township is similarly organized. Detroit was set down for 125 (Protestant) schools, with 2625 officers and teachers, and 21,250 pupils. Canada had 6689 schools, 55,706 teachers and officers, 472,623 pupils, 55 organized counties, and New Brunswick fully organized. Newfoundland and Labrador, 314 schools, 2162 officers and teachers, 22,817 pupils. The entire world was figured at 183,390 schools, 1,199,569 teachers and officers, and 17,716,212 pupils.—19,715,781 in all. The reports in general are for Protestant evangelical schools only.

Supreme Court, Michigan.—The Supreme Court of the Territory (1805) consisted of a Chief and two Associate Judges, all appointed by the President, and holding "during good behavior," in 1824 limited to four years. The State laws (1836) similarly provided, and a fourth Judge was added in 1838. The Constitution of 1850 made the Judges of Circuit Courts together the Supreme Court for six years, when (1857) the court again became a separate tribunal, with four Justices, and a fifth under the law of 1877. The member whose term (formerly eight, now ten) years

soonest expires is Chief Justice. It is the court of appeals, with original jurisdiction in certain cases; and is the court of last resort in this State.

Chief Justice John Wayne Champ-
lin, of Grand Rapids, was born at
Kingston, N. Y., in 1831, and has been

a resident of
Michigan 36
years. His
prominence
as an attor-
ney made
him a fre-
quent candi-
date of his
party for
judicial hon-
ors; he was
Judge of the
Recorder's
Court of
Grand Rapids
in 1861, can-
didate for Cir-
cuit Judge in



CHIEF JUSTICE J. W. CHAMP-
LIN.

1863, and for Prosecuting Attorney of
Kent county in 1864, was Mayor of
Grand Rapids in 1867, and candidate
for the same office again in 1868. He
was nominated for Justice of the Su-
preme Court by the Fusion party in
1883, and elected over Hon. Austin
Blair, Republican, by a vote of 127,376
to 119,870; 13,467 votes were cast for
John H. Tatem, Prohibitionist.

Justice Allen Benton Morse, of Ionia,
was born in Otisco, Ionia Co., Mich.,
Jan. 7, 1839, and lived on a farm until
he was 19

years old.
He attended
the Agricul-
tural College
1858-59, and
was studying
law in Ionia
when the war
broke out.
He enlisted in
the 16th
Michigan In-
fantry, July
30, 1861, and
served until
Dec. 26, 1862,



JUSTICE A. B. MORSE.

as private
and non-commissioned officer. He was
promoted to the rank of First Lieuten-
ant for bravery on the field, and lost
his left arm while serving on Col. F. T.
Sherman's staff at the battle of Mission
Ridge. On his return from the war he

resumed his studies and was admitted
to the bar in 1865. He was a Republi-
can until the Greeley campaign, when
he supported the Democratic candidate,
and has since acted with that party.
In 1885 he was elected Justice over
Thomas M. Cooley by a majority of
nearly 30,000.

Justice Claudius B. Grant, of Detroit,
was born at Lebanon, Me., Oct. 25,
1835. He came to Michigan at an early

age, and en-
tered the Uni-
versity in
1855, gradu-
ating in 1859.
At the call for
troops he en-
listed with the
Twentieth
Michigan In-
fantry and
served to the
end of the
war, leaving
the service
colonel of his
regiment. On



JUSTICE C. B. GRANT.

his return he
entered the University Law School, and
was admitted to the bar June, 1866.
His first public office was Recorder of
Ann Arbor, since which time he has
been Postmaster of that city, Member
of the Legislature, Regent of the Uni-
versity, and Prosecuting Attorney of
Houghton county, and was Judge of the
Twenty-fifth (Marquette) Circuit when
elected by the Republican party to fill
his present position.

Justice Charles Dean Long, of Flint,
was born at Grand Blanc, Genesee Co.,
Mich., June 14, 1841, son of Peter

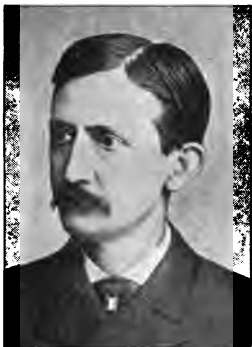
Long, who
came to
Michigan
from Massa-
chusetts, and
descendant
of one of the
oldest fami-
lies of the Old
Bay State.
He prepared
for the State
University,
but the
breaking out
of the war
changed his
plans, and he
shouldered a
musket and went to the
front as a private in Company A,



JUSTICE C. D. LONG.

Eighth Michigan Infantry. He was twice wounded in the battle of Wilmington Island, and had to be returned home incapacitated for further service on account of wounds. After his return he took up the study of the law. Always a staunch Republican, he was elected by his party to numerous offices, and in 1885 was chosen as Department Commander of the G. A. R. for Michigan. In 1887, when the Supreme Court was increased to five members, he was elected by 36,000 majority over Hon. Charles D. Camp, of Saginaw.

Justice Edward Cahill, of Lansing, appointed by Gov. Luce to fill the unexpired term of Hon. James V. Campbell, of Detroit, deceased, was born in Kalamazoo 1843, studied in Kalamazoo College, learned the printers' art, served as a private in the 89th Illinois Infantry and a captain in the First Michigan Colored



JUSTICE EDWARD CAHILL.

Troops, was admitted to the bar 1866, practiced in Ionia and Chicago, settled in Lansing 1873, was Prosecuting Attorney for Ingham Co. two terms, and Member of the State Board of Pardons. He will be succeeded on the Supreme Bench Jan. 1, 1891, by Justice McGrath.

Justice John Wesley McGrath, of Detroit, was born in Philadelphia Jan. 12, 1842, and came to Michigan when but one year old. His early boyhood was spent in farm work, but in 1862 he entered Albion College, and two years later the University Law School. In 1865 he served in the Provost Marshal's office in Detroit



JUSTICE J. W. M'GRATH.

under Gen. Flanagan, and left there a short time later to undertake mercantile business in Pennsylvania. He re-entered the Law School and after two years graduated and took up law practice in Detroit in 1868. He was a Republican until 1878, when he went over to the Democratic party, with whom he has since affiliated. He organized the State Labor Bureau under Gov. Begole, and was Commissioner two years. He was a member of the Detroit Board of Education four years, and was City Counsellor at the time of his elevation to the Supreme Bench. His term of office expires Dec. 31, 1895.

Supreme Court, Federal.—The Justices of the United States Supreme Court, with their ages and dates of appointment, are as follow: Melville W. Fuller, 58, 1888; Stephen J. Field, 73, 1863; Joseph P. Bradley, 76, 1870; John M. Harlan, 54, 1877; Horace Gray, 57, 1881; Sam'l Blatchford, 69, 1882; Lucius Q. C. Lamar, 64, 1888; and David J. Brewer, 53, 1889. There is one vacancy by death of Justice Miller, appointed 1862.

Switzerland, by recent census, contains 1,700,000 Protestants, 1,200,000 Roman Catholics, 8300 Jews, and 10,700 non-religionists.

Tabernacle (formerly Lafayette-ave.)

M. E. Church, Fourth and Howard sts., Detroit, was organized May 1, 1849,

sold its property 1873 and removed to present site, where the church was dedicated 1874. Sitings about 900; value, \$40,000; membership, 360. All seats free; expenses met by weekly free-will offerings. Services on



REV. WM. DAWE.

Sunday 10:30 and 7:30; S. S., 12; weekly prayer meeting Wednesday at 7:30; Epworth League Friday 7:30; class meetings Sunday morning and evening. Pastor Wm. Dawe, D. D., is a native of Cornwall, Eng., born March 5, 1848, began to preach 1869, came to this country April, 1871, graduated from Theol. Dep't N. W.

Univ. 1877, and received D. D. from Albion College 1890. He joined Detroit Conference 1873, came to Tabernacle church 1880, and again 1886, meanwhile erecting and serving Palmer Memorial church four years. Residence, 125 Howard.

Table, an Extemporized.—Bob Burdette's way of making a table in a hotel-room where there is none he describes as follows: "I take out a bureau-drawer, turn it upside down, push it back in place about two inches, and defying the landlord have a table it would break his heart to see."

Tariff of 1890.—This measure was passed by a Republican Congress, and signed by a Republican President, and thus embodies the Republican principle of protection to American industry. The tariff on sugar is reduced from 3 or 3½ cents to ½ cent per pound (some coarse grades free), but to offset this bounties of 1½ to 2c. are paid on the home production of sugar. Coffee and tea are on the free list. Tobacco (leaf) pays \$2 to \$2.75, against 75c and \$1 before; cigars \$4.50 and 25% additional, against \$2.50 and 25% additional. Distilled liquors pay \$2.50, against \$2; wines, 50c. to \$8 against 50c. to \$7; and malt liquors 20 to 40c., against 20 to 35c. Metals and manufactures of metal remain about the same, except tin plates, which rise from 1c. by the previous tariff, to 2.2c. now. Clothing is 50%, against 35%; cotton cloth, 2 to 50, against 20 to 5; dress goods (woolen), 7 to 8c. and 40%, against 5 to 7c. and 35 to 40%; jewelry, 50%, against 25%. Important changes are made in farm products: Wool 11 to 12c., against 10 to 12c.; butter 6 (formerly 4); cheese 6 (4); eggs free (5); milk 5 (10%); live poultry 3 (20%), dressed do. 5 (25%), beans 40 (10%), hay \$4 (\$2), potatoes 25 (15) hops 15 (8), cabbages 3 (10%), honey and maple syrup 20, onions and green peas 40, other vegetables 25%, wheat 25c., corn, oats, and buckwheat 15, barley 30, rye 10, rice 1½ to 2c., garden seeds and nursery stock 20%, horses and mules \$30 or 30%, cattle \$2 to \$10, hogs \$1.50, sheep 75c. to \$1.50 or 20%, meats 2 to 5c. [See also Art-works.] Provision is made favoring reciprocity of free trade between governments, by providing that the President may suspend the free list as to sugar, molasses, coffee, tea, and hides, against such exports from any country imposing what he considers reciprocally unequal and un-

reasonable duties upon any products of the United States, and he may require the payment of duties upon the articles specified.

Tarring and Feathering, instead of being a purely American barbarism, is now proven to be an old English custom, at least as old as the time of Richard the Lion heart. Setting out on one of his crusades, one of his enactments for the regulation of his fleet was that "a robber who shall be convicted of theft shall have his head cropped after the fashion of a champion, and boiling pitch shall be poured thereon, and the feathers of a cushion shall be shaken out on him, so that he may be known, and at the first land at which the ship shall touch he shall be set on shore." Whether the custom was earlier we have no means of determining; but it is at least hard upon 700 years old.

Taste.—Some very curious and careful experiments have determined the order of the effect of substances upon the organs of taste as follows: Bitters, acids, saline substances, sweets, alkalies. Except for salts, women have more delicate taste than men. Of 128 persons, men detected one part quinine in 390,000 parts of water, women 1 in 456,000; sulphuric acid, men 1 in 2080, women 1 in 3280; cane-sugar, men 1 in 199, women 1 in 204; bicarbonate of soda, men 1 in 98, women 1 in 126; but common salt, men 1 in 2240, women 1 in 1980. Some tasters detected 1 part of quinine in 5,120,000 parts of water, while others failed to find 1 in 160,000.

Temple Beth El, Detroit, is one of the most prominent Jewish congregations in the country, having had amongst its eminent Rabbis Rev. Liebm an Adler, father of the architect of Chicago Auditorium, Rev. Dr. K. Kohler, now of the New York Temple Beth El, and Rev. Isidore Kalisch, of New York City. Member-ship, active and contributing, about 150. The Temple, a substantial struc-



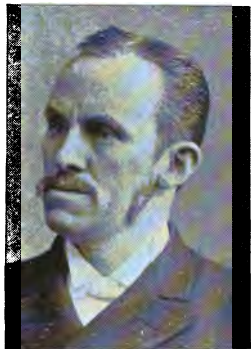
RABBI LOUIS GROSSMAN.

ture at Washington ave. and Clifford st., seats 1000; total property, \$75,000. Services Saturday at 16, Sunday at 11, all open to the public. Charitable and literary societies connected: Hebrew Relief, Literary, Ladies' Sewing, Hebrew Widows' and Orphans', Young Girls' Aid, Little Girls' Literary and Fair, Industrial School, Phoenix Club, Emerson Circle, Philosophical Club, English Literature Class, Boys' Own Club. Rabbi Louis Grossman, author of "Judaism and Science of Religion," "Maimonides," etc., b. Feb. 24, 1863, entered the ministry Dec., 1884, at Hebrew Union College, Cincinnati, Ohio, and took his present position at once. Residence, 63 Henry st.; reception evening, Friday.

Telegraph.—A new system has a sending instrument with ten keys, each making one of the straight or curved lines used in the common alphabet. It is claimed to have sent a 76-word message in 25 seconds, and printed it in plain Roman characters. Over 1200 miles of telegraph wire are said to be strung overhead in New York City.

Telephones, Long-distance.—A line is successfully operated from Erie, Pa., to New York City, 500 miles; and it is said a successful test has recently been made of a telephone line from St. Petersburg to Boulogne, 2465 miles.

Third ave. Presbyterian Church, near Alexandrine ave., Detroit, is an outgrowth of a mission Sunday-school started in 1867, upon a pecuniary foundation supplied by the late F. J. B. Crane. The original building, much improved, is yet in use. The civil organization was effected July 21, 1886, the ecclesiastical Nov. 11, with

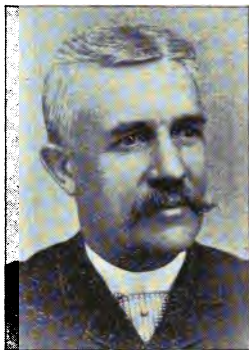


REV. J. M. BARKLEY.

21 members, to which 242 have since been added. Present membership, 232. A new \$15,000 chapel and Sunday-school rooms will go up this year. Pastor James M. Barkley was born near Statesville, N. C., Nov. 22, 1846, and graduated at Princeton College 1876

and Seminary 1879, ordained May 9, 1879, called to this church Nov. 11, 1886, and installed May 23, 1887. Residence, 759 Second ave.

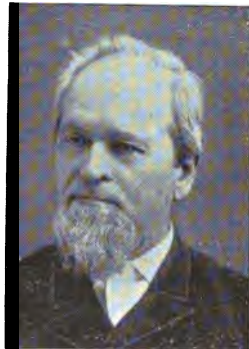
Thompson Presbyterian Church, at Woodward and Hendrie aves., Detroit, organized 1885 as Congregational, as now Feb. 9, 1889. Chapel completed Feb. 16, 1890; sittings, 500; value with lot, \$27,500; membership, 145. Sunday service 10:30 and 7:30, S. S. 12. Mid-week service Wednesday eve. All seats free; public cordially invited. Rev.



REV. H. P. WELTON.

H. P. Welton, D. D., pastor, was born in Ohio 1838, entered ministry 1868, took this pastorate Feb., 1889. Residence, 24 Medbury ave.; study in chapel.

Trinity Congregation, German Evangelical Lutheran Church, Gratiot ave. and Rivard st., Detroit, removed to its present brick structure 1865, from its frame house of worship on Larned st. Sittings, about 800; property value, \$25,000; membership, about 300 families. Sunday services 10, and 2:30 and 7:30 alternately. Rev. John A.



REV. J. A. HUEGLI.

Huegli, pastor, was born in Bavaria January, 1831, came to America 1842, prepared at Concordia College, St. Louis, and was ordained at Jonesboro, Ill., 1856, and installed as pastor Trinity Congregation Jan., 1860. With one exception, he is probably the oldest pastor in the city by continuous service. Residence in parsonage, 377 Gratiot ave.

Rev. F. Hahn, pastor of Trinity mission, cor. Dubois and Medbury sts., was

born Jan. 1, 1865, at Hillsdale, Mich., was pastor at Otis, Kansas, and came to the mission March 5, 1889. The chapel and parsonage property here are worth \$2400; sittings in the former, 250; membership, 43. Mr. Hahn also has charge of the English Lutheran mission on Russell st. Residence, 1272 Dubois st.



REV. F. HAHN.

Trumbull-ave. Congregational Church, corner Seventh st., was originally the Sixth-avenue Mission, organized 1868, and removed to its present quarters 1881, under auspices of the First church. The society was organized April 27, 1881, with 69 members. Value of church property, \$12,000; membership, 243. All seats free; voluntary offerings support church. Sabbath services 10:30 and 7:30 (7:45 in summer), Sunday-school 2:30. Lord's supper at 12 first Sunday each month; conference and prayer-meeting, Wednesday, 7:45. The church is just now pastorless.

Trumbull-ave. Presbyterian Church, Detroit, was colonized from the Fort-st. church, organized 1881 with about 40 members, and is now probably the largest church of the faith in Michigan, with one exception. Membership, 625; Sunday-schools, including mission, 900 members. Eminently a young people's church. House of worship dedicated Feb., 1888, costing about \$40,000; sittings, main room 800, chapel 450. Galleries now going in former will increase to 1250. Pastor R. J. Service was born in Ireland Sept. 20, 1856, entered the ministry Oct., 1883, and assumed the pastorate of this church March 4, 1888.

Trusts.—The great monopolies of this country known as "trusts" are the Standard Oil Trust, organized as such in 1882, and by the latter part of 1888, according to the report of a legislative committee, controlling properties worth \$148,000,000; the Sugar Trust, formed Oct., 1887, with \$45,000,000 capital; the Cotton-seed Oil Trust, embracing about 70 mills and refineries in various States; and a Milk Trust, with head-

quarters in New York. There are many others, covering rubber goods, oil-cloths, envelopes, meats, glass, furniture, elevators, etc.

Tunnel, St. Clair.—The tunnel completed last summer by the Grand Trunk Railway between Port Huron, Mich., and Sarnia, Ont., under the St. Clair River, is 2267 yards long—777 under land on the American side, 770 under the river, and 720 under land on the Canadian side. Length of ascent on American side, 1633 yards; on Canadian, 1657. Minimum depth below bed of river, 15 feet; maximum below surface of water, 66½; clear internal diameter, 20, containing one track; lining, cast iron; cost, about \$2,500,000. Several great decapod or ten-wheeled locomotives, weighing 90 tons apiece, are constructing for service in the tunnel.

Tunnel under Detroit River.—The Detroit Railroad & Tunnel Company has been formed, with \$1,500,000 capital, to construct a tunnel under the Detroit River at Detroit, and operate therein railroad tracks and switches. The incorporators are Luther Beecher (11,955 shares), Mary W. Beecher (1000), Gen. L. S. Trowbridge, Collins A. Clark, Fred A. Baker, and Jonathan Ormerod (10 each), A. McClellan, and L. W. Hallock (1 each), all of Detroit; and George L. Beecher of Negaunee (2000 shares). It is expected that ground will be broken for it, if at all, on this side at Fort st., near Eleventh. A Canadian company is understood to be promised, to build a tunnel to the international boundary under the river, where it will meet the work of the Detroit company.

Twelfth-st. Baptist Church, Twelfth and Linden sts., Detroit, is the growth from a mission of the First church, and was organized in 1874. Reported 331 members at last meeting of Association; Sunday school 421 enrolled, average attendance 288. Sustains the West Baptist and Kirby missions. Present house of worship,



REV. W. H. STEDMAN.

formerly occupied by the Park Place church, seats 400. Site has been purchased at Grand River ave., Brigham and Thirteenth sts., for \$4000. Pastor W. H. Stedman, D. D., born near Towanda, Pa., Aug. 12, 1840, spent his boyhood in Cincinnati and Southern Illinois, graduated at Shurtleff College 1869, was ordained in August over the church he organized while still a student, at Shelbyville, Ill., was afterwards pastor at Urbana and Mendota, Ill., and came to his Detroit pastorate Jan. 1, 1887. Received D. D. from Shurtleff 1889. Resides 763 Wabash ave.; calls any secular forenoon but Monday and Saturday.

Union, the Industrial.—An important movement was set on foot Nov. 29, 1890, at a meeting in Lansing called by a joint committee of the Patrons and the Farmers' Alliance of Ingham and Eaton counties, in the hope of a better understanding and more fraternal feeling among all labor organizations of the State. To this end a State organization was effected, to be known as the Industrial Union, and a corps of officers elected for it. It is announced, in addition to the purpose above named, that it will aim to forward helpful legislation, check if possible the encroachments of corporated monopoly, and take a general interest in everything pertaining to the welfare of the producing masses. Mr. Charles Hasse, of Lansing, is Secretary of the Union.

Unity Church, Brigham and Crawford sts., Detroit, organized as Third-ave. Mission church June 7, 1882, as Unity

church of our Lord Jesus Christ Jan. 1, 1887. Undenominational, but evangelical. Chapel built 1886; sittings, 200; property, \$5000; membership, about 100; Sunday school, 200. Sabbath services 10:30 and 7:30, S.

REV. C. E. HULBERT.

S. 2:30; prayer-meeting Wednesday evening; Y. P. S. C. E. Friday evening. Pastor Chas. E. Hulbert was born at Sault Ste. Marie Oct. 12, 1840, grandson

of the veteran missionary, Rev. Abel Bingham; was a Union soldier 1861-65; entered the ministry June, 1867, ordained a Baptist minister May, 1869, withdrew from this connection July, 1875, has been pastor of Unity from the first. Residence, 52 Brigham st.; telephone, 4778-38, per J. Knight & Son; at home to 9:30 A. M., 1 to 3:30, and 6 to 7:30 P. M.

University of Michigan.—The noble institution now known in all civilized lands by this title, was founded upon a land-grant by Congress to the Territory in 1804, but was not provided for until the first session of the Legislature after the State was admitted (1837), nor opened until 1841, the first class graduating 1845. Originally branches, little better than preparatory schools, were started at Detroit, Monroe, Pontiac, Romeo, Tecumseh, White Pigeon, Kalamazoo, and Niles; but the system was abandoned in 1850. The University has since had a solid and reasonably rapid growth, and has long been among the foremost schools of learning in this country. Students 2890-91, about 1400.

James Burrill Angell, LL. D., President of Michigan University, was born in Scituate, R. I., Jan. 7, 1829, was graduated from

Brown University in 1849, spent two years in European travel and study, was Professor of Modern Languages and Literature at Brown 1853-60, editor of the Providence Journal (Senator Anthony's pa-



PRES. JAS. B. ANGELL.

per) 1860-66, and President of the University of Vermont 1866-71. He was offered the Presidency of the University of Michigan in 1869, and declined it, but accepted upon a renewal of the offer in 1871, and came to his duties the same year. He was U. S. Minister to China 1880-81, by appointment of President Hayes; and in 1887 served as a member of the commission for settling the disputed fishery question with England. He is the author of many articles in the North American Review and other high-class periodicals

United Workmen, Ancient Order of.

The character, strength and importance of this organization give it right to notice in the Year Book. It is a beneficiary order, with liberal life insurance, and was organized Oct. 27, 1858, from another society, by a few mechanics, headed by J. J. Upchurch, a machinist for the Atlantic & Great Western R. R. The Michigan Grand Lodge was formed Feb. 27, 1877, and made a separate beneficiary jurisdiction March 25, 1878. The order in this State has increased from 1101 at the close of 1877 to nearly 17,550 at the end of 1890, and in the country at large and Canada from 35,886 to 250,000 in the same period. The offices of the Supreme Master Workman and the Grand Recorder are in the superb new University Building, Wilcox street, near Woodward avenue, Detroit.

The Rev. W. Warne Wilson, Supreme Master Workman, A. O. U. W., was born at Damerham, Eng., Nov. 11,



W. WARNER WILSON,
Supreme Master Workman, A. O. U. W.

1849, and settled in Detroit in 1872. He was elected the first Master Workman of Detroit Lodge No. 6, May 1, 1877, Grand Recorder in August of the same year, Past Grand Master Workman in 1880, Representative of Grand Lodge of Michigan in Supreme Lodge 8th, 9th, 10th, 11th, 12th, and 14th annual sessions, Supreme Overseer in 1888, Supreme Foreman in 1889, and Supreme Master Workman in 1890. He is still also in service as Grand Recorder. Oct. 18, 1882, he was ordained Deacon in the Episcopal Church by Bishop Harris, and is now Assistant Rector of St. John's Church, Detroit.

Unitarian Church, corner Woodward ave. and Edmund Place, Detroit, was organized Oct. 6, 1850, and called its first pastor, the Rev. T. J. Mumford, the next spring. After occupation of business buildings on Jefferson avenue for nearly two years, the church edifice

now known as Philharmonic Hall, at Lafayette ave. and Wayne st., was built, and dedicated Sept. 8, 1852. It was reconstructed and refitted in 1871 at a cost of \$17,500, which was nearly one and a half times the original price of the building. Membership 1850, 140; in 1860, 260; 1870, 300; 1880, 380. The succession of pastors since 1859 has been the Rev. Messrs. S. S. Hunting, A. G. Hibbard, J. F. Walker, W. R. G. Mellen, Calvin Stebbins, T. B. Forbush, and Reed Stuart, the present pastor, who came to this church from the Independent Congregational church in Battle Creek.

United States.—This term has been used, not only for the United States of America (1776), but the United States of Mexico (1824), United States of Colombia (1861), and the United States of Venezuela (1864). The hopeful formation of the United States of Central America, to have been completed in August, 1890, has been indefinitely postponed by the late war between Guatemala and San Salvador. The expected "United States of Brazil" became simply the Republic of Brazil.

United States Courts, Michigan.—The Federal Circuit Court for Michigan was provided for by act of Congress July 1, 1836. The Sixth Judicial Circuit, to which both Michigan Judicial Districts are attached, by act of July 23, 1866, consists of the States of Michigan, Ohio, Kentucky, and Tennessee. Circuit Judge, Howell E. Jackson, of Tenn.; Supreme Court Justice assigned to this Circuit, David J. Brewer, of Kansas. This is the appellate court from the U. S. District Court, and has original jurisdiction over all causes arising under Federal law except admiralty cases, and of litigation between citizens of different States and between citizens and aliens, when the amounts involved are more than \$2000. The Court sits in Detroit, beginning on the first Tuesdays of March, June, and November. Coincident with these are the terms of the U. S. District Court, which has also sessions in Port Huron and Bay City. This court has original jurisdiction in all cases arising under U. S. law, including admiralty cases, which are heard on the first Tuesday of each month. By act of Feb. 24, 1863, the State was divided into two Judicial Districts, the Eastern and Western, the latter having sessions of the District Court at Grand Rapids and Marquette, presided over by Judge H. F. Severens.

Hon. Henry Billings Brown, Judge of the Eastern District, was born March 2, 1836, at Lee, Mass., graduated at



JUDGE H. B. BROWN.

Yale College in the class of 1856, after a year's travel in Europe took a law course at Yale and Harvard, came to Detroit and was admitted to the bar in 1860. He was Legal Deputy U. S. Marshal 1861-3, Assistant U. S. District Attorney 1863-7, and began a general law practice in 1867, making admiralty law a specialty. After a short term as Circuit Judge of Wayne County, to fill vacancy, he resumed practice, and in 1875 President Grant appointed him to the position he now holds. He was a prominent candidate for the Supreme Bench when Justice Brewer was nominated, and is now prominently mentioned for the present vacancy on that Bench.

United States of America.—The population of the country, by the recent census, numbers 62,480,540, exclusive of Alaska, whites in the Indian Territory, and Indians on reservations. Gen. Meigs estimates our populations for the next century as follows: 1900, 99,653,333; 1910, 119,737,177; 1920, 159,650,377; 1930, 212,867,177; 1940, 283,822,877; 1950, 381,763,837; 1960, 509,018,449; 1970, 678,691,205; 1980, 904,921,686; 1990, 1,206,562,248. Multum, the great English statistician, thinks the census will also exhibit a phenomenal energy in this nation of 100 million foot-tons per day and a total wealth of 70 billions of dollars.—“figures,” he adds, “never before applicable to any nation in the world. He says the working power of this country is three times that of France, $2\frac{1}{2}$ that of Germany, and $1\frac{1}{2}$ that of Great Britain. Our sea-coast line, with indentations, ascertained by the Coast Survey, is 78,389 miles, and total boundary lines 84,889, exceeding the united coast-lines of Asia, Africa, Europe, South America, and Mexico, by more than 2000 miles.

Where is the geographical center of the United States? Strictly speaking,

it has none. Taking Quoddy Head, Me., as the most eastern point, Alton (among the Alaska) Islands the most western, Point Barrow, Alaska, the most northern, Key West, Fla., the most southern, and forming a parallelogram, it appears that our geographical centre is 270 miles west of San Francisco, in the Pacific ocean.

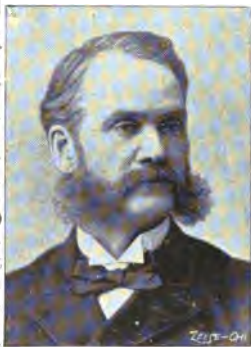
Ninety-seven per cent of our people live where mean temperature in July ranges between 65° and 85°; and 70 per cent where the mean in January, the coldest month, ranges from 20° to 40°. [For U. S. Government, census statistics, etc., see Appendix.]

Uranium.—A mine of this metal, the only one yet found, has been opened in Cornwall, Eng.

Wall-paper.—One of the latest applications of electricity is to wall-paper so mounted that low-tension currents can be passed through it, moderately warming it and diffusing an agreeable temperature through the room.

Warren-ave. Baptist Church, Warren and Third aves., Detroit, was organized Oct. 26, 1888, and dedicated

its chapel Dec., 1888, with seats for 350, and a property of \$11,000. Membership, 106; Sunday-school, 150. Services Sunday at 10:30 and 7:30; Sabbath-school at 12; social meeting Wednesday at 7:30. Seats free, and



REV. JOHN MATHEWS.

strangers welcome. Pastor John Mathews was born Dec. 29, 1833, in Jay, Essex Co., N. Y., studied at Madison (now Colgate) University, was graduated in 1858 and 1860, accepted call to the Lafayette-ave. church, Detroit, Oct., 1860, was ordained Feb., 1861, and took his present pastorate in 1888. Residence, 242 Warren ave. west; receives calls at any time.

Wayne County.—The population of this county is reported by the Census Bureau at 256,838; increase since 1880, 90,394. Its population is undoubtedly not less than 275,000. Taking the census figures, however, and deducting

these given Detroit (205,699), and there remain for the rest of the county 51,139. Wyandotte City has 3798. The assessed valuation of Wyandotte and the townships, with the taxes (except local) for 1891, was fixed by the Board of Supervisors at its October session, as follow: Brownstown, \$866,578; \$1786.04; Canton, \$1,014,744, \$3008.98; Dearborn, \$1,202,313, \$3172.56; Ecorse, \$1,178,033, \$3651.36; Greenfield, \$2,538,707, \$6447.18; Grosse Pointe, \$2,001,263, \$4539.71; Hamtramck, \$3,101,230, \$7360.91; Huron, \$534,848, \$2080.96; Livonia, \$953,677; \$1866.38; Monguagon, \$867,136, \$2140.50; Nankin, \$973,022, \$2561.00; Plymouth, \$2,152,594, \$4914.31; Redford, \$1,167,817, \$2622.01; Romulus, \$578,962, \$1913.42; Springwells, \$3,333,803, \$7631.05; Sumpter, \$387,140, \$980.16; Taylor, \$391,036, \$954.95; Van Buren, \$981,079, \$2024.76; Wyandotte — first ward, \$276,125, \$705.35; second ward, \$426,676, \$1089.78; third ward, \$248,627, \$695.11. Totals, Wyandotte and townships, \$25,175,310, \$61,486.68; city of Detroit, \$143,993,448, \$333,677.25. Grand totals, \$169,168,748, \$395,163.93. Total of State tax to be raised, \$200,498.81; county tax, \$123,318.43; sinking fund, \$20,726.44; poor and insane tax, \$30,681.57; rejected, charged back, and delinquent, \$8010.50; drain tax, \$6665.75; expense of collecting county tax, \$5262.43. Rate of taxation, \$2.05 per \$1000, against \$3.31 last year. [For county officers, see Appendix.]

Wayne County Historical and Pioneer Society.—Organized to promote historical work in the county and State, genealogy of early settlers, etc. Resident members live in Wayne county and pay admission fees of \$2 and annual dues of \$1; life members pay \$10; there are also corresponding and honorary members, who may live anywhere. A book of "Chronography of Notable Events in the History of the Northwest Territory, Wayne County," has been published under its auspices. J. Wilkie Moore, president; Fred Carlisle, secretary, 51 Campau Building, Detroit. Provision is made for auxiliary societies in the townships of the county, whose members are also admitted to the County Society.

Wayne County and Detroit Courts.—All courts of justice now holding sessions in Detroit are noticed below, except the United States Courts (which see).

Circuit Courts.—A Circuit Court in this county was provided for in 1800,

but there is no record of its organization. The county formed a circuit under the law of April 23, 1827, with a Supreme Court Justice as Judge; but under State law March 26, 1836, the Wayne Circuit stretched to the Upper Peninsula, including Mackinaw and Chippewa counties. March 25, 1840, the county alone became a circuit, with one judge under the Constitution of 1850, three judges by act of June 10, 1881, and four by act of 1887. These courts have the ordinary powers of circuit courts in the State. Terms begin on the first Tuesdays of January and April, the third Tuesday of June, and the second Tuesday of September.

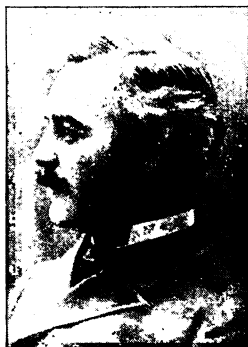
Judge George Stedman Hosmer was born in Detroit May 13, 1855, lived in Buffalo 1866-9, graduated from Detroit High School 1871, and the academic department of Michigan University 1875, was admitted to the bar 1878, in 1880 became junior partner of Griffin, Dickin, Thurber and Hosmer, and was elected Judge in 1887. He is



JUDGE G. S. HOSMER.

serving a second term as one of the Detroit Public Library Commissioners.

Judge Cornelius J. Reilly was born at Heart Prairie, Wis., May 26, 1848, was educated at Racine, Wis., came to



JUDGE C. J. REILLY.

Detroit 1867, was admitted to the bar 1871, four years later was appointed Circuit Judge to fill vacancy caused by resignation of Judge Patchin, and succeeded himself for the full term in 1876. He resigned from poor health Nov., 1879, and in 1882 was defeated for the same office by

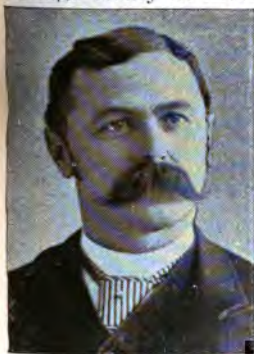
only 48 majority. Judge Reilly resumed general practice, and in 1887 was again elected by a handsome majority.

Judge George Gartner was born Oct. 10, 1850, at Grosse Pointe, Mich., of German parentage, attended at the State Normal School and the Law Department of the University, graduating in 1872 came to Detroit and began successful practice. was Assistant Prosecuting Attorney 1885-7, tried over 500 State cases, and in 1887 was elected Circuit Judge. He served on the Detroit Board of Education four years, and was President of the Board one year.



JUDGE GEORGE GARTNER.

Judge Henry N. Brevoort, descendant of one of the oldest French families here, was born on Grosse Isle April 3, 1848, was admitted to the bar in 1874, was Prosecuting Attorney for Wayne county in 1876-80, and in 1887 was elected Circuit Judge.

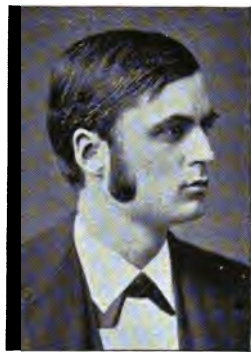


JUDGE H. N. BREVOORT.

PROBATE COURT, DETROIT.—This is among the oldest of the local courts, one case of administration on record being dated 1797. It has the ordinary powers of Surrogate or (in this State) of Probate Courts. A Register of the Court was provided for in 1809, abolished 1835, and restored in 1861. The court is virtually in perpetual session, open every secular day at its rooms in the City Hall, from 8 A. M. to 4 P. M.

Edgar O. Durfee, Probate Judge, was born near Livonia, Wayne Co.,

Mich., Oct. 28, 1842. He attended the State Normal School, and took one year at the State University. In the civil war he served with the Twenty-fourth Michigan Infantry, losing his right arm in the battle of Gettysburg. He then settled



JUDGE E. O. DURFEE.

in Detroit, began the study of law, and in 1872 was appointed Register of Probate under Judge A. H. Wilkinson. In 1876 he was elected Probate Judge, and re-elected in 1882 and 1888.

RECORDER'S COURT.—By law of Feb. 5, 1857, this was substituted for the Mayor's Court. It takes cognizance of all cases not subject to final disposition in the Police Courts of the city, and those over which such courts have no jurisdiction, concerning offenses against the city charter and ordinances and criminal offenses under the State law committed in Detroit; also of matters related to the opening of streets and alleys, etc. In 1889 the Legislature granted this court an Associate Judge. Its terms are held in the new Municipal Building, at Clinton avenue and Raynor street, beginning the first Wednesdays of January, March, May, July, September, and November. City ordinance cases are heard on Mondays.

Associate Judge F. H. Chambers was



JUDGE F. H. CHAMBERS.

admitted to the Michigan bar November, 1867, was Circuit Judge of Wayne county 1879-87, was appointed Associate Judge of this court in July, 1889, and elected in the following No-

vember.

Judge George S. Swift graduated at Middlebury College 1839 and at Yale Law School 1841, was admitted to the Ohio bar the same year and to the Michigan bar in 1855, was elected Recorder - Judge November, 1866, and served continuously until 1889, when ill-health compelled him to retire from active service. Judge Swift has never had a portrait taken, and naturally declines to supply one for the Year Book.

POLICE COURTS.—A Police Court was established here by law of April 2, 1850, and a second Justice given it by



JUDGE EDMUND HAUG.

act of 1885. They conduct all preliminary examinations in criminal cases, and have jurisdiction over violations of any city ordinances which expressly give them jurisdiction, and over violations of State law in Detroit in which justices of the peace commonly have jurisdiction; and may bind over to the Recorder's Court or sentence to the House of Correction or commit to the House of the Good Shepherd in certain cases. The Police Courts sit every weekday in the new Municipal Building, corner of Clinton avenue and Raynor street.

Justice Edmund Haug was admitted to the bar at Marshall, Mich., in 1882. He was elected Police Justice of Detroit 1885, and re-elected 1887. He became Senior Justice last spring, when Justice Miner's term expired.

Justice Patrick J. Sheahan was admitted to the bar in March, 1888, and



JUDGE P. J. SHEAHAN.

was elected a Police Justice the next year.

JUSTICES' COURTS, DETROIT.—Justices of the Peace were provided for in the early day of the Northwest Territory, 1788; and several were commissioned for Wayne county in 1796. There were formerly four for the city, then six, then four again by law of 1883. They have original jurisdiction in civil actions where the debt or damage does not exceed \$100, and concurrent jurisdiction with the Circuit Courts in civil actions on definite or implied contracts to the amount of \$300. Appeals lie from them to the Circuit Courts. Sessions are held daily, 9 to 12 and 2 to 4 o'clock, in the building on Congress street east, near Bates. Justice John Patton is now the Senior Justice, having been elected in 1880. Justice Walter Ross was elected in 1882, and will be succeeded July 4, 1891, by Thos. W. Fitzsimmons, Justice-elect. Justice O. L. Kinney was elected in 1888, and Justice James Phelan in 1889.

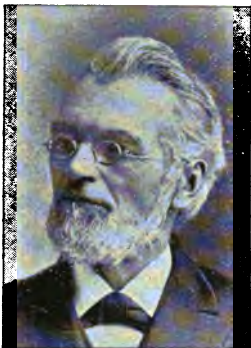
Westminster Presbyterian Church, Woodward ave. and Parsons st., Detroit, colonized from Fort-st. church 1857, worshiped on Washington ave. till present superstructure ready 1881. Sittings, 960; membership, 612. Seats free at evening services. New chapel with complete equipment nearly finished. Prof. Albert



REV. HOWARD DUFFIELD.

A. Stanley, of Mich. Univ., organist and musical director; one of best quartette choirs in city; a chorus also in contemplation. Sunday services 10:30 and 7:30; Sunday-school, at 12. Rev. Howard Duffield, D. D., pastor, was born at Princeton, N. J., April 9, 1854, was graduated at Princeton College 1873, Seminary 1877; installed at Westminster April 10, 1884; received D. D. from Princeton 1888. Residence, 694 Woodward; telephone, 4662; receives calls Mondays, 7:30 to 9:30 P. M.

West Baptist Mission, Scotten ave. and Visger st., Detroit, has yet no church building, but owns a site and will fully organize a church and build soon. It was established by the Twelfth-st. church. Average attendance, about 100; of Sunday school, 75. Rev. S. W. Titus, in charge, was born in Sandy Creek town-



REV. S. W. TITUS.

ship, Oswego Co., N. Y., June 11, 1819, was ordained in Chaplesburg, N. Y., Aug. 27, 1845, and served in various pastorates for more than 40 years, among them Flint, Mich., and Twelfth-st., Detroit, until failing health compelled retirement. He lives at 433 Lincoln ave.; welcome callers at any time.

Wealth of the World.—Estimated at \$253,750,000,000. In 1882 England had £7,178,000,000, or £262 per head of population; Scotland, £990,000,000 (£101); Ireland, £552,000,000 (£83). United wealth of Great Britain and Ireland, 1887, £9,210,000,000. Other countries of Europe, by latest returns:

	In Millions.	Per Capita.
France.....	£8,060	£218
Germany.....	6,323	140
Russia.....	4,343	53
Austria.....	3,613	95
Italy.....	2,351	82
Spain.....	1,593	93
Portugal.....	371	...
Belgium.....	806	145
Holland.....	987	240
Denmark.....	366	198
Sweden.....	977	153
Greece.....	211	...

The total wealth of the United States in 1880 was \$43,642,000,000, or \$870 per head. It is now hardly less than \$64,000,000,000, or about \$1000 for every man, woman, and child.

Wheat Harvest nearly rounds the year in different parts of the world. It occurs in January in Australia, New Zealand, Chili, and the Argentine Republic; February and March, in Upper Egypt and India; April, in Lower Egypt, India, Syria, Cyprus, Persia, Asia Minor, Mexico, Cuba; May, in Texas, Algeria, Central Asia, China, Japan, Morocco; June, in California,

Oregon, Mississippi, Alabama, Georgia, North Carolina, South Carolina, Tennessee, Virginia, Kentucky, Kansas, Arkansas, Utah, Colorado, Missouri, Turkey, Greece, Italy, Spain, Portugal, South of France; July, in New England, New York, Pennsylvania, Ohio, Indiana, Michigan, Illinois, Iowa, Wisconsin, Southern Minnesota, South Dakota, Nebraska, Upper Canada, Roumania, Bulgaria, Austria-Hungary, the South of Russia, Germany, Switzerland, South of England; August, in Central and Northern Minnesota, North Dakota, Manitoba, Lower Canada, Colombia, Belgium, Holland, Great Britain, Denmark, Poland, Central Russia; September and October, in Scotland, Sweden, Norway, North of Russia; November, in Peru, South Africa; December, in Burma.

Winans, Edwin B., Governor-elect of Michigan, is a native of the Empire State, born at Avon, Livingston Co., May 16, 1826, but coming to Michigan with his parents eight years afterwards. He received his higher school education at Albion College, engaged in gold mining in California 1850-58, then settled



GOV. E. B. WINANS.

on the farm he has since occupied at Hamburg, Livingston Co., Mich. He was a member of the lower house in the State Legislature 1861-65, one term Judge of Probate, and Representative in Congress 1883-87, and elected Governor on the Democratic ticket 1890, by a plurality of about 12,000 over James M. Turner, his Republican competitor. He will take the gubernatorial chair Jan. 1, 1891.

Wonders of the World.—The seven wonders of the ancient world are commonly given as the pyramids of Egypt, the mausoleum of Athens, the temple of Diana at Ephesus, the walls and hanging gardens of Babylon, the Colossus of Rhodes, the statue of Jupiter Olympus, and the Pharos or light-house at Alexandria. Older authors substi-

tute the Egyptian labyrinth and the artificial Lake Moeris for the mausoleum and the Pharos. The seven natural wonders of the New World are considered to be Niagara Falls, the Yellowstone Park, the Mammoth Cave, the Canons and Garden of the Gods in Colorado, the Big Trees of California, the Natural Bridge in Virginia, and the Yosemite Valley, California.

Woodward-ave (Second) Congregational Church, corner Sibley st., was organized 1866, colonized from the

First church, and erected its present fine building 1873. Seating capacity, 700. Sunday services 10:30 and 7:30, S. S. at 12, young people's meeting 6:45; mid-week meeting 7:45 Wednesday, Young People's Society 7:45 Tuesday each month. Pastor H. P. De Forest was born at Brockton, Mass., Aug. 20, 1839, was ordained Dec. 18, 1867, and took his Detroit pastorate first Sunday in June, 1889. Residence, 33 Charlotte ave.



REV. H. P. DE FOREST.

Woodward-ave. Baptist Church (formerly Lafayette-ave.), Woodward and Winder st., Detroit, was organized in



REV. C. R. HENDERSON.

1860, and dedicated its present superb temple in Jan., 1887. Total church property, including mission chapel, North Russell st., estimated at \$180,000. Membership, 644. Services Sunday at 10:30 and 7:30, Sunday school at 12, special class of adults at 3:30; mid-week meeting for study and worship Wednesday at 7:30 from October to May, 7:45 May to October; young people's meeting Friday 7:45;

conversations on social laws Tuesday evening twice a month; public cordially invited to all. Rev. Chas. R. Henderson, D. D., pastor, is a native of Covington, Ind., born Dec. 17, 1848; ordained Aug., 1874; called to this church July, '82. Residence, 77 Watson st.; telephone, 4040; office hours 1:30 to 2:15, and Thursdays also 5:30 to 6:30.

Wool.—The Northern States grow nearly four-fifths of the wool raised in this country. Ohio leads all the States with nearly 26,000,000 pounds annually; California ranks next with about 17,000,000. Missouri and Texas are the principal wool-growing States of the South, the former with about 8,000,000 and the latter 7,000,000 pounds. Montana grows 1,000,000.

Writing-paper.—The average English adult consumes 10½ pounds a year; American, 8; German, 7½; Frenchman, 3½; Russian or Mexican, 2; Italian or Austrian, 1½; Spaniard, 1.

Wyoming was admitted to the Union July 10, 1890. She has 97,575 square miles, or about three-fifths more than Michigan; and had a population in 1880 of 20,789, in 1890 of 60,589, showing nearly 300 per cent of increase.

Zion (First) German Reformed Church, Detroit, organized Nov. 20, 1849, worshipped in the City Hall, dedicated a brick sanctuary on

Croghan, near Beaubien, and July 6, 1890, dedicated their beautiful new building at Chene and Jay sts. Sitings, 300, with arrangements for 500 to 700 more; value of property, \$15,000. Sunday



REV. C. F. W. HASTEDT.

services 10:30 and 7:30, S. S. 9 and 3; religious instruction 9 A. M., Saturday. Everybody invited. Rev. Carl F. W. Hastedt, pastor, was born in Diepholz, Hanover, May 28, 1853, came to America 1868, entered the ministry 1871, and labored in Ohio until called to Zion church 1887. Residence, 412 Chene st., corner Jay; may be seen at any time.

THE DETROIT JOURNAL.

How a Modern Daily Newspaper Is Published.

A subscriber, who signs himself "Constant Reader," asks, "Will you please publish a description of just *how* the DETROIT JOURNAL is issued?" This question is not easily answered without subdivision, and it will therefore be treated in installments.

It is doubtful if there is any other business so dependent upon the accurate daily dealing with a multitude of details. Should an accident befall any one of the thousands of little pieces of type that are handled every day in setting up the JOURNAL, some critical friend will write in to call the JOURNAL's attention to the bad proof-reading. If there should be an error in any of the hundreds of statements in any issue during the year, it is pounced upon by the 100,000 pairs of eyes which daily scan the JOURNAL, and the discovery is duly transferred to a postal-card correction. The 300-eyed fly is insignificant, even as a type of watchfulness, compared with "Constant Reader," with his 100,000 pairs of eyes. The answer to the first installment, therefore, is, that the DETROIT JOURNAL is published in a *glass house*.

Five times a day, viz., at 8, 9:30, and 11 A. M., and 2 and 3:30 P. M., the letter carrier arrives with packages of letters, often running as high as one or two hundred at a time; and although they concern every possible phase and department of the business, the more inexperienced writers invariably address them to "The Editor," who, it would seem to them, consists of one man, who does practically all the work. The mail is opened by the proprietor and sorted into departments, and then a whistle-signal brings the office-boy, who takes it to the various destinations. From this it may be inferred, as a second answer, that it requires more than one man to get up the daily issue of the DETROIT JOURNAL.

Following the boy with the mail, a fair average illustration of the points of contact would be about as follows: The package laid on the Managing Editor's table contains communications, circulars, requests, criticisms, copy, etc., etc., which is speedily subdivided and delivered to its respective destinations, in the hands of the corps of editors. This is all "up stairs." Were an *editor* to write this article on the DETROIT



W. H. BREARLEY.

(Proprietor and General Manager Detroit Journal.)

JOURNAL, he would begin and end his article there, as being the only thing really worth mentioning about a daily newspaper. There are other departments, however, and the boy has not finished his mission until he retraces his steps to the lower regions. He will find an errand to the Accountant's department, with letters containing bills and collections and acknowledgment of orders, to illustrate, for another car of paper, or a few more barrels of ink. Next the Subscription department will receive the tokens of the successes and trials attending the sale and circulation of the paper; while to the head of the Advertising department is delivered the "changes" of advertising, the requests for rates, together with all the parts of the complicated details of his department, which is communicated through the mail. There remain only two departments, viz., the Mechanical

(subdivided into the press and the stereotyping rooms), and the composing room, where the type-setting is done by a large force of compositors. This brief outline of six departments, will give a *third* answer to the question viz., that the men who issue the paper are organized into departments, having distinct and important duties.

The fourth answer is that the co-operation of these departments each day is as essential to the issue of a paper as the working together of the wheels of a watch. Not one can

be spared, and in this sense they are alike essential, although diverse in their method of action. There is no day of the year when the Editorial department can absent itself, for the **DETROIT JOURNAL** publishes "today's news today." The news must be put into type before it can be used. The pressmen can not print from the type, as stereotype plates must first be made, and then comes the hurry of the complicated Circulation department, with its clerks, carriers, agents, and the army of boys, to handle and dispose of the papers when printed. Out of several hundred supposable incidents illustrative of this absolute dependence of one department upon another, the following is a fair sample of what may occur

any minute of any day in the year:

A telegraph message from an interior town gives the details of some important occurrence. The paper is nearly ready to issue, and the space is full. The news is too important, however, to be left out, so it is rushed into shape by the editor with his pencil, a boy standing at his elbow to take each sheet as he scribbles it off (wonder how many of the readers would enjoy this way of preparing matter for 100,000 pairs of eyes!). The Managing Editor gives the foreman of the composing room directions as to which article already in type he can leave out to partly make room. He then sends for the head of the Advertising

department to come up and leave out one or two advertisements which can be inserted some other day. The Managing Editor has one more duty to perform. This is accomplished by sending information of this article to the head of the Circulation department, so that extra papers can be sent to the town from which the news came. This co-operation of departments has numerous and intricate ramifications that can not be easily explained.

In war it is often possible to employ one division of an army and hold others in reserve, but in the publication of a newspaper, which is not unlike a battle, every man is worked to his full capacity every day. So great is the daily strain, that it is a source of wonder to those familiar with the inside workings of a newspaper that mistakes and oversights do not occur more frequently. When "Constant Reader" imagines he finds in some simple error an evidence of malice, or in the accidental missing of the delivery of a single paper some intentional slight, he imagines an approximate impossibility. The business of a great daily paper is to publish the news, and it has no time or inclination to divert its attention to the expression of malice. It has everything to gain by trying to

treat each separate item with exact justice and fairness, but it would be strange indeed if errors were not made, through pure inadvertence, in the rush and whirl of the daily routine. When a reputable paper publishes an error, it injures itself more than any outside enemy can possibly injure it. No paper will willingly hurt itself.

The fifth specification of this composite answer is, therefore, that the **DETROIT JOURNAL** is published daily, under a pressure and strain that attend the workings of few other kinds of business, and with attempted accuracy in all its statements.

Unfortunately, sixth, there is no way yet invented to retain all the money that comes



EDITORIAL DEPARTMENT.

(C. F. Leidy, Managing Editor.)

into a paper. The financial demands are as importunate as taxation or death. While the income is fluctuating and dependent upon the circulation and the advertising patronage, the expenses wait for nothing, and like the poor, "are ever with us." To say nothing of the pay-roll of about 70 men, and the paper bought by the car-load and used by the ton, there are bills for telegraph, telephone, correspondents, and other necessities almost innumerable. At a recent session of the Michigan Press Association, one of those present from an interior town complained of the expense he was subjected to in purchasing "plate matter." He had, so he said, to pay for it \$2.00 a page, of six columns. It may be explained to the uninitiated that "plate matter" is the matter supplied from New York or Chicago, in stereotype plates, one column wide, so arranged that they can be cut up and used as wished, without any editing or type-setting. The matter is edited in New York, and then thousands of duplicate plates are made, and sent to any paper desiring it, having a purely local circulation. While therefore the local paper of a small town buys three-fourths of the matter used, all edited and made into plates, at \$2.00

for six columns, the JOURNAL pays about \$2.00 per column for the mere type-setting alone. All of the matter in the DETROIT JOURNAL is set up new, and costs no small sum to procure and edit.

The organization of the DETROIT JOURNAL into close, co-operating departments within itself would not be effective, without both receiving and contributing to outside associations. Of these, the Associated Press is the most important. This news-gathering organization, with national headquarters in Chicago and New York, has agents in every large city in the United States, and is connected with similar foreign associations. The Michigan agent is located in Detroit and calls at the JOURNAL every hour or two, every day, to learn of the happenings throughout Michigan, which come in hourly from the JOURNAL's correspondents in every city and town in the state. From this he selects the most important and wires it to Chicago, where the news received from all sections of the country in a similar way is made up, and sent out by wire

by Woodward avenue, the eastern side being controlled by Mr. Towle and the western by Mr. Garnsey, who hire their own carrier boys, purchase each day at wholesale some thousands of JOURNALS, direct their distribution, and make their own collections. Orders or complaints received at the JOURNAL office from these districts are turned over to these carriers.

Outside of Detroit, the circulation is by mail or through agents. The latter method is employed in the 350 towns large enough to support a free house-to-house delivery. Bundles of papers are made up each day and expressed to these agents, who go to their depots when the trains arrive, to receive and distribute the papers sent. Once a week they collect for the papers delivered. The uniform price in and out of Detroit is 10 cents per week.

The press-room view of the newspaper is interesting, but difficult to understand by the inexperienced. The type, locked in "forms" at stated periods, comes down from the composing room upon the elevator. It is seized by

the stereotypers, and by means of a process requiring about ten minutes and a high degree of skill, a paper matrix is produced, from which duplicate plates are cast—four plates from each "form." These plates are then placed upon the two perfecting presses, two of these plates upon each press. Thus each press is soon equipped with enough plates to produce two complete papers, or four papers simultaneously from the two presses. Large rolls of paper are unwound automatically at one end of each press, and running in and through it to the opposite end, the papers drop out printed



CIRCULATION DEPARTMENT.
(Fred Slocum, Manager.)

to all the papers receiving these dispatches. Thus thirty or forty thousand words of telegraph matter, or several times what the JOURNAL deems important enough to use, are daily laid down in the JOURNAL editorial rooms, the price being a fixed amount weekly.

The view of a newspaper from the standpoint of one of the 2000 or more licensed Detroit newsboys is not unimportant. He must get a permit at the Mayor's office and a license at the Police headquarters, and a badge which will cost him 10 cents; and he is ready for business. He can buy his papers at wholesale, one cent per copy, at the JOURNAL's newsboys' room, or from any one of the thirty distributing stations, which are located at various points about the city. Some of the boys content themselves with peddling on the street at retail, two cents per copy, while many others have worked up routes of their own and have lists of regular subscribers, who are not known at the office.

The newsboy is not the only agent of delivery, for Detroit is divided into two sections

on both sides complete, cut apart, cut off, folded, and ready for sale and delivering. The press outfit of the DETROIT JOURNAL is capable of producing 40,000 complete papers per hour (printed on both sides and folded complete), and is equivalent to the entire capacity of four hundred Washington hand-presses. The significance of this statement is more apparent when it is understood that one of these primitive presses, which Franklin invented and used, is still employed as the sole outfit by more than half of the newspapers of America.

The details of the Advertising department are important, complicated, and technical, requiring the undivided time of a force of experienced men. The JOURNAL's equipment in this respect is one of the best, and its representatives command the respect of the business public, and secure their full share of advertising patronage. The difficulties and intricacies of this one department are such that the proper discussion of any one of its many subdivisions would require the space given

this entire article. But "Constant Reader" may wonder, if, with all this machinery of department organization, the Gen'l Manager has anything left to do. The following daily routine will answer this question: At 8 A. M. comes the care of the first mail, followed by the looking over of the proofs of the editorials. Then a tour of the different departments, and a few words with the head of each. Then the 9:30 mail, followed by receiving and discussing the book-keeper's report of the preceding day, which includes the number of papers printed, how disposed, the amount of advertising contracts made, the amount of advertising billed, and the advertising actually executed (this obtained each day from an inventory made of what the paper contained), the cash collected for advertising and from sales of papers, the amount paid, and the cash on hand. The discussion of these reports and the thousand and one interruptions consume the forenoon and portions of the afternoon. Between 4 and 6 P. M. each day occur the consultations, separately with the heads of departments, concerning the day past and the one to come.

Without doubt, the highest place of honor and responsibility belongs to the Editorial department, which has been reserved to the last that it might be more fully described.

The JOURNAL's editorial force consists of five local news reporters, a city editor, marine reporter, market reporter, society editor, state editor, an editorial writer, a managing editor, and the managing editor's assistant.

Contrary to the rule in most lines of business, the superior officers, if the word may be used, have to do the most work. The managing editor on an afternoon paper is usually the first man at his desk. He comes into the front door as the bells are ringing 7 o'clock. The city editor comes along about 20 minutes later, and the reporters soon follow. By 25 minutes to eight everybody is hard at work.

Take the local department first. The city editor first arranges and distributes the night news items among the five reporters, who verify them by telephone and otherwise and write them out in very brief form. The work of verifying, correcting, and condensing this matter occupies from an hour and a half to two hours. As soon as each item is complete it is carried to the city editor, who reads and corrects it and, whenever possible, cuts out superfluous words and phrases. It is then carried to the managing editor, who also reads it and catches any

errors which may have passed the city editor unnoticed. From the managing editor's desk a cash-carrier takes it into the composing room, where the foreman sits with a big pair of shears.

If it is more than half a page long this functionary cuts it into "takes" and distributes them among the printers. Soon afterwards the printer returns the "take" of copy together with a take of type all "set up." The takes of type are laid together in column form and wedged into a flat, shallow, oblong box lined with brass and called a "galley." The "devil" then inks the type, lays a strip of paper over it, and rolls a heavy iron roller over the paper. When the paper is taken off it has the item or items printed on it. This is called the first "proof." The proof-reader compares it with the original matter and marks all the printer's errors. Incidentally he sometimes detects errors which have escaped the editors and corrects them also. The proof-reader should have an eagle eye and a general knowledge of everything from Egyptian history to the latest theory on the cure of consumption. When the proof-reader errs there is no one to correct him, until it is too late. Then he gets corrected.



ADVERTISING DEPARTMENT.

(A. H. Finn, Manager.)



ACCOUNTANT'S DEPARTMENT.

(F. A. Batchelder, Cashier.)

It is the devil's duty to cut up the proof-sheets and hand them back to the printers, who thereupon make the corrections in the type. A second proof called a "revise" is then taken, and more corrections are made if necessary. The same course is pursued with advertisements.

As each item or "ad" is completed it is carried to the "stone." From there the foreman carries it to the forms and lays it in its assigned place. A "form" is simply an iron chase filled with type the size of the newspaper. When a form is filled with type, it is "locked up." It is then sent to the stereotyping room. There it is placed upon a table and a sheet of wet paper pulp laid upon it. The whole is then put into a press and squeezed down until the face of the type is buried in the pulp. It is then put into an oven. The heat dries and expands the pulp, so that in a few minutes it may be peeled

ing, or to report a trial. Sometimes there are no assignments. In that case each reporter "takes his beat," and the "loose man" goes out on a general skirmish. On other occasions when something of unusual interest occurs one man may be obliged to attend two or three beats, and several be assigned to look up different phases of the great event.

There are four regular beats on the JOURNAL. They are "courts," "municipal," "crime," and "Windsor." The Windsor man usually disposes of his beat between 10:30 and 1 o'clock, and devotes the remainder of his time to general work. He is responsible for all events in Essex county.

The municipal man attends meetings of the council, obtains routine news in the city and county offices, reports all kinds of delays, proceedings, and results of the city contracts and the workings of the different commissions, and is ever on the lookout for dishon-



COMPOSING ROOM DEPARTMENT.
(P. N. Bland, foreman.)

off the form. The type has left a deep impression upon the paper which is called the "matrix."

This matrix is immediately placed in a half-cylinder and molten type metal poured in upon it. When the metal has cooled it is taken out—a complete half-cylinder shaped plate with the converse side molded into letters, words, sentences, paragraphs, and articles. When all four of the forms have been thus treated the "plates" are locked upon the cylinder of the press, steam is turned on, and JOURNALS begin to come out.

But to return to the editorial rooms. It is 9 o'clock, and the night news has all been written up and is in the hands of the managing editor.

The city editor proceeds to give his assignments. Each reporter is requested to interview so and so, to look up such and such an event, to obtain a biography, to attend a meet-

ing, incompetency, and corruption among persons who serve the people. The municipal reporter is the watch-dog of the treasury. He can not entirely prevent robbery, but he restrains it. Boodlers and corruptionists fear him. But for the municipal reporter the city would be at their mercy.

The court reporter inspects all papers filed at the beginning and at all stages of every suit begun in any of the civil courts, and reports upon important cases at certain interesting stages. He also watches the daily records of the judges' work and reports all important actions. But for him thousands of cases tried in the courts would be unheard of, except among a few attorneys, and many villains, now known and shunned, would be able to pass as honest men, and to practice their villainy under the cloak of a good business and social position. On the other hand the court reporter delights to hold up honest

and honorable men as bright and redeeming spots in the dark pictures which he is often compelled to draw.

The criminal reporter visits the police headquarters, police court, poor commissioners, and city physician's offices, and keeps in constant telephone communication with the coroners, hospitals, ambulance stations, and fire headquarters. If a barn burns in Springwells he must know of it. If a dock-laborer at 24th street loses his finger he is supposed to receive immediate notice from some quarter. Burglaries, assaults, murders, and outrages of all kinds he is expected to know of as soon almost as they occur. From the opening of the police court at 8 o'clock, until the last minutes before going to press, he must be continually on the alert. A good criminal reporter must have the perspicacity of a detective, the industry of a beaver, and the tact of a diplomat. He exposes all kinds of crime, and brings many criminals to justice by poking up detectives and making them work hard. He is hated and dreaded by incendiaries, roughs, burglars, and other wrong-doers.

The loose man visits the hotels, interviews notable guests, investigates stories sent in by telephone, and writes special articles. His work is pleasant, varied, and interesting. He exposes neglect of duty on the part of public corporations.

The five regular reporters "turn in" their matter three times a day. The marine and society reporters are not regular attaches of the staff. They choose their own hours of work and turn in matter at stated intervals.

The State editor is a hard-worked man, and upon him devolves the duty of keeping JOURNAL readers informed of all the occurrences in the great State of Michigan. To this end he has a system of special correspondents (one in nearly every city and town in the State), which furnishes him with a multitude of items, by mail, telegraph, and telephone. He must also read 1000 State papers a week, in case the correspondents should by any possibility overlook some event of interest, and must daily prepare a column of brief State notes. In addition to this devolves upon him the handling of the dramatic criticisms, preparation of book notices, and help with the night telegraph.

The managing editor's assistant prepares the digest of foreign and domestic news at the head of the editorial column, helps to chop out the reprint, and does whatever else offers.

The editorial writer keeps abreast of the times and writes editorials.

The Managing Editor reads and approves of every line of matter, excepting advertise-

ments, that goes into the paper. He reads the Associated Press dispatches and selects those which are important enough to use. He reads the general exchanges and selects the reprint. He receives reports from the marine and society reporters and corrects them, looks over the final proofs, makes suggestions, exercises supervision in all departments, writes the "kaleidoscope" items, and does other things too numerous to mention.

The reader expects, when he takes up the JOURNAL each evening, to find it attractive, bright, interesting, and full of new, readable, and reliable matter. To produce this result day after day, every day in the year, requires an effort something akin to that of a clergy-



MECHANICAL DEPARTMENT.

(N. W. Healy, Pressman; Geo. Curtis, Stereotyper.)

man who should preach a fresh, new sermon of his own origination, every day in the year.

The number of different persons necessary to the getting out and disposing of each day's issue of the DETROIT JOURNAL, would probably exceed 2000. About 70 are carried on the payroll, but to these should be added the 400 correspondents in Michigan cities, and 350 or more business agents also in these places, as well as a thousand or twelve hundred newsboys in Detroit and Windsor, all of whom derive all or some portion of their income every day from their connection with the DETROIT JOURNAL. This estimate does not touch upon the problem of gathering news by the Associated Press, in all parts of this country and foreign countries, for if their representatives were added, it would double if not quadruple the number of different persons who each day are essential to the issuing of this paper.

In conclusion, the JOURNAL trusts that "Constant Reader" will not restrain the epistolary evidence of his watchfulness, for it is a pleasure to know that readers feel a proprietary interest in the paper of their choice, and their letters and their calls are always welcome.

APPENDIX.

Material for the following paragraphs was received too late for insertion in its proper place:

Bethel A. M. E. Church, Napoleon and Hastings sts., Detroit, is a recent structure, brick with stone trimmings, gothic style, fitted with church-parlors, library, class rooms, study, kitchen, and all needed modern conveniences. Sittings, 700; cost, \$18,000.

Rev. Jas. M. Henderson, late pastor, was born at Evansville, Ind., Sept. 19, 1859, graduated at Oberlin 1881, and received honorary M. A. from same college 1884; taught in Afro-American High School, Evansville, was licensed to preach in 1883, ordained deacon and elder 1883-85, preached at Bloomington, Ind., and came to Detroit 1886. Here he was mainly instrumental in building the handsome edifice now

occupied. At the late Conference meeting in Saginaw he was appointed Presiding Elder for Michigan and Northern Indiana. He has written much for the press, and is regular correspondent for three of his race-papers.

Correction.—In the notice of Asbury M. E. Church, page 18, for "young people's meeting Friday, 7:30," read "Epworth League Meeting Friday, 7:45," and for "638 Grandy ave.," (residence of pastor), read "1294 Chene street."

U. S. Supreme Court.—Since the sheet of the Year-book containing a notice of the United States Court went to press, Judge Henry B. Brown, of the Federal Court for the Eastern District of Michigan, has been appointed by President Harrison a Justice of the Supreme Court.

EVENTS OF THE YEAR.

DECEMBER, 1889.

13.—London fog; 11 drowned, many injured. Cave-in at Iron Mountain, Mich.; 3 killed. Warren Leland, Jr., hotel proprietor, falls.

14.—Petoskey high-school building burned. Floods do \$250,000 damage in Sutter Co., Cal. Three nitro-glycerine magazines explode near Warren, O.; \$100,000 loss. Business part of New Carlisle, O., burned.

15.—Epworth M. E. church, East Saginaw, dedicated. Earthquake in Granada, Spain.

16.—Influenza epidemic in Europe; 100,000 cases in Paris, 15,000 in Berlin. Famine in Galicia. Burke, Coughlin, O'Sullivan, and Kunze found guilty of Cronin murder; Beggs acquitted. U. S. Supreme Court decides law taxing telephone receipts unconstitutional.

17.—"La grippe" in Detroit. Dynamite explosion at Cleveland mine, Ishpeming; 2 killed. Str. Tenby Castle wrecked off Holyhead; 11 lost. Premature blast Osceola mine, Calumet; 3 killed. Whittier 82 years old.

18.—Prohibitory liquor law passes North Dakota Legislature. Justice Brewer confirmed.

19.—D. Moshier killed by Lake Shore train. Detroit. Fire in Tilden school, Detroit; 7 girls fatally burned, 13 others seriously.

20.—Str. Cledly sunk off the Isle of Wight, by collision with the Isle of Cyprus; 13 lost.

21.—Brazil Provisional Government decrees banishment of ex-Emperor and family.

22.—Cave-in at Angels' Camp, Cal.; 16 miners killed. Corner-stone Bethel A. M. E. church laid, Detroit.

24.—Vicksburg, Miss., fire; \$160,000 loss. Czar and King of Portugal down with influenza.

25.—Remarkably mild Christmas; thermometer 60° in many parts. Thunder-storm in Southern Michigan. Astronomer Brooks discovers his third comet for the year.

26.—Main building Western College, Toledo, Io., burned; \$150,000 loss.

27.—Revival services begin First Baptist church, Detroit.

28.—Accident on Chesapeake & Ohio R. R.; 10 killed. Gov. Goodell of N. H. orders enforcement of prohibitory liquor law. Eight negroes lynched at Barnwell C. H., S. C. Carlos I. proclaimed King of Portugal. Family of 11 burned at Hurontown, U. P.

29.—Great snow-storm in Kansas and Missouri. Amphitheatre fell at bull-fight, Villa Laredo, Mex.; 100 injured.

30.—Gladstone 80 years old. New Academy of Music, St. Louis, Mo., collapsed with 50 workmen; 1 hurt.

31.—Collision on Panhandle R. R., Kokomo, Ind.; 3 killed. Sixth victim Tilden school fire dies.

JANUARY, 1890.

1.—Boys' Charity school, London, burned; 26 suffocated. \$300,000 fire in New York. Royal palace near Brussels burned, with invaluable art-gallery. 3000 cases influenza at Copenhagen. Rain in Michigan, first on New Year's for ten years.

2.—W. F. Sanders and T. C. Power elected Senators from Montana. News of massacre of 30 Siberian exiles by Russian guards. Terrible hurricanes at sea.

3.—Resignation of Spanish Ministry. Antislid House vacated, Detroit.

4.—Thermometer 35° below at Helena, Mont. Heavy snows in California. Gardner, Ind.,

burned; loss, \$90,000. News of famine at Flowers' Cove, N. F.

6.—Mail carrier frozen near Washington, Cal. Filbert furniture factory burned, Detroit; loss, \$30,000. Collector Campau resigns.

7.—Michigan Exchange hotel, Detroit, closed, after nearly 55 years' occupation.

8.—Furniture factory, Sandusky, burned; \$100,000 loss.

9.—Bridge caisson sunk in Ohio at Louisville; 16 drowned. Wall of new Presbyterian church, Brooklyn, blew down; 2 killed, 7 hurt. Brazil proclaims religious equality and separation of church and state.

10.—Floods in Southern Illinois and Iowa. Two business blocks burn in Leamington, Ont. Moody in Detroit.

11.—Deep snows in Upper Peninsula. Boiler explosion, Cincinnati; 9 injured. English ultimatum to Portugal.

12.—Heavy snow in New Mexico.

13.—Colorado Springs high school burned; \$30,000 loss. \$300,000 fire in Baltimore. Controller Moloney resigns, Detroit, and Peter Rush appointed. Portuguese Cabinet resigns. Tornado in parts of Ky., O., and Mo.; 18 killed.

14.—Tornado continues. E. R. Wilson re-elected Senator from Maryland. New trials denied Cronin murderers, except Kunze. Republican Mayor in Detroit. Earthquake in Cerinthia, Austria.

15.—Calvin S. Brice elected Senator from Ohio.

16.—Six Indians hanged at Fort Smith, Ark.

17.—Accident on C., H. & D. R. R. near Cincinnati; 6 killed, 13 injured.

19.—Central school building, Coldwater, burned; \$30,000 loss.

20.—New Spanish Cabinet formed.

21.—New Mt. Pleasant school-house burned; \$3500 loss. Blizzard in State of Washington. Snow blockade Central Pacific R. R.

22.—Natural gas explosion, Pittsburg; 1 killed, 8 hurt. News of cholera ravages in Mesopotamia.

23.—Annual show of Eastern Michigan Poultry and Pet Stock Association opens, Detroit. Gales and floods in England.

24.—National Non-partisan W. C. T. U. organized in Cleveland. Explosion of natural gas, Columbus, O.; 3 killed, 30 hurt. Earthquake at Bellfoot Lake, Tenn. Cadillac high-school burned; loss, \$13,000.

25.—Snow blockade Central Pacific broken. Socialist Bill rejected by German Reichstag.

27.—Bunker Hill, Ind., burned. Accident on Monon Route near Indianapolis; 6 killed, 18 wounded. Myers' stable, Ishpeming, burned; \$43,000 loss. News of 3000 deaths from cholera at Khorassan, Persia.

31.—DETROIT EVENING JOURNAL announces plan of testimonial to France for Revolutionary services. Packing-house burned, Kansas City; loss, \$300,000. Sail-boat crosses Straits from Cheboygan to Bois Blanc.

FEBRUARY.

1.—Mexico recognizes Republic of Brazil. Cave-in of old mines, Plains, Pa. McCarthy road-house, Hamtramck, burned.

2.—Sears building, Boston, burned, \$250,000 loss; also water-cure, etc., Kenosha, Wis., \$125,000; and five blocks at Danbury, Ct., \$300,000.

3.—Sec'y Tracy's house burned, Washington; daughter suffocated, wife killed by jumping from window, French maid burned to death. Canadian Pacific car-house burned, Ottawa, Can.; loss, \$100,000. Freight train goes through bridge, Peoria, Ill.; 3 killed. Hon. Seth Low installed President of Columbia College, New York.

4.—Samoan treaty ratified by Senate.

Centennial of formation U. S. Supreme Court celebrated, New York City. Railroad bridge accident near Cascade Locks, Ore.; 10 killed, 15 hurt. Shipwreck near Nankin, China; 100 lost. Earthquake at Nagano, Japan. Report of 100 drowned by cloud-burst on Yang-tze-Kiang river, China.

5.—Large fire in Portland, Me. Heavy robbery of Pacific Express Company. Chinese victory in Formosa. Flo ds in Oregon and avalanches in Idaho.

6.—Colliery explosion, Abersychan, Wales; about 100 killed. Australian Federation Conference in Melbourne.

7.—High winds and much damage in Western Pennsylvania and Northwestern States; earthquake in New Jersey; landslide in Oregon. Incipient coup d'état stopped in Paris; Duc d'Orleans arrested.

9.—Family of 6 and 2 others drowned through ice near Kingston, N. Y. Palace of Margaret of Navarre, Paris, burned.

10.—H. R. Newberry of Detroit appointed Secretary of Legation at Madrid, and Chas. E. Smith of Philadelphia Minister to Russia. Sioux Reservation opened, S. Dakota. Anti-Mormon victory at Salt Lake City election.

11.—New building M. E. Book Concern dedicated, N. Y. City. Swarms of "boomers" on Sioux Reservation. Mayor Pingree vetoes electric-lighting contract, Detroit. Parliament opens.

12.—Gen. T. J. Morgan confirmed Indian Commissioner. Congress congratulates Republic of Brazil. Duc d'Orleans sentenced to two years in prison. Lamoreaux seed-store burned, Grand Rapids; \$20,000 loss.

13.—Oklahoma Territorial bill passed. \$500,000 fire in Farwell Block, Chicago. Unprecedented snow-storm in Texas. Detroit high-school building entered by burglars; also on 17th inst. News of death of Sultan of Zanzibar, and of defeat of Ras Aloula by King of Abyssinia.

14.—New rules of order adopted in Federal Ho. Reps. Toronto University building burned; \$500,000 loss. Newly wedded pair and 10 others drowned at Pontivy, France.

15.—City Treasurer Davis, Rochester, N. Y., defaults for \$80,000. Baltimore & Ohio R. R. collision near Bairdstown, O.; 3 killed.

16.—Boulangier victories at Paris elections. Chapel of Thompson Presbyterian church, Detroit, dedicated.

17.—Three Protestant evangelists mobbed at Hull, Can. News of steamer Duburg lost in China Sea; 400 drowned.

18.—Extradition treaty with England ratified by Senate. Finest Mardi Gras pageant known in New Orleans. Steamer Coral Queen sunk by steamer Brisio off river Tees; 16 lost. Lockout of leather-workers in Massachusetts.

19.—Russia demands 3,000,000 rubles of Bulgaria, cost of military occupation. Colliery explosion near Decize, France; about 35 lost. Blizzard and severe cold in Northwest.

20.—Carnegie Library dedicated, Allegheny, Pa. Sixteen temperance crusaders arrested. Spickardsville, Mo. Navassa rioters sentenced, Baltimore. Enormous Socialist gains in German elections. New town-house dedicated at Plymouth, Mich.

21.—News of great storms on Chinese coast. 22.—Dam near Prescott, Ariz., gives way. 50 lives and \$1,000,000 lost. Tobacco factory burned, Richmond, Va.; \$250,000 loss. Heavy snows in Sicily.

23.—Enforcement of Sunday law, Norwalk, Ct. Holland Socialists arrested in Berlin.

24.—World's Fair contest settled in House of Representatives in favor of Chicago. Troubles in Oklahoma. Cupola of new concert hall at Hamburg fell; 5 killed, 8 hurt.

25.—Fifth-ward school house, Bay City, burned; \$5000 loss. Two doctors of Ky. School of Medicine indicted for grave-robbing. Destructive floods in O., Ky., and Ind.

26.—Pan-American Congress votes for international railway.

27.—Boise, first Democratic Governor of Iowa for 34 years, inaugurated. Blizzards out West. Railroad men accused for fatal accident in Kalamazoo acquitted.

28.—Ex-Congressman Taulbee of Ky. fatally shot by newspaper correspondent in Washington. Hawes hanged at Birmingham, Ala., for murder of wife and 3 children. Labouchere suspended from House of Commons. Railroad accident, Ithaca, Mich.; 2 killed. Two feet of snow fell in Upper Peninsula.

MARCH.

1.—W. T. Harris, U. S. Com'r of Education, lectures in Detroit. Stevens residence, Ypsilanti, burns; loss, \$5000. Steamer Quetta sunk off Australian coast, with 120 lives.

2.—Pope Leo's 80th birthday. Blizzard in New England, with 18 inches snow; killing frost about Pensacola, Fla. \$100,000 fire in St. Joseph, Mo.

3.—First block of tin from American mine received at Pittsburgh. Floods in Cumberland and Tennessee rivers.

4.—Senator Allison of Iowa re-elected. State Treasurer of Missouri suspended by Governor, pending investigation. Teller Pope, City National Bank, Louisville, runs away with \$60,000. \$300,000 fire in New York City.

5.—Lake Shore collision near Buffalo; 6 killed.

7.—Palacio chosen President of Venezuela. 8.—Imposing funeral of ex-Minister Pendleton in Cincinnati.

9.—Fires: \$250,000 in factories burned in Detroit; costly factory fires also in Cleveland; \$100,000 loss in Kansas City, Mo. Imperial mausoleum dedicated at Charlottenberg, Prussia.

10.—Amherstburg (Ont.) town hall burned; \$18,000 loss. Colliery explosion, Clamorgan-shire, Wales; 88 killed.

11.—Stern, Mayer & Co. clothing house, Cincinnati, burned; loss, \$500,000. Hungarian Premier resigns.

12.—Louisiana lottery bill finally killed in North Dakota Legislature. Cyclone destroys Excelsior, Ark.; several hurt. Strike of 1000 iron-miners near Ashland, Wis. Influenza taking 70 a day at Teheran, Persia.

13.—Hocking Valley R. R. shops burned at Columbus, O. Government defeats in French Senate and British House of Commons. Webber's nitarium formally opened at Ionla. Seynoid Ali, brother of late Sultan, succeeds to throne of Zanzibar. New Peruvian Cabinet.

14.—Bauerle woodwork factory, Petoskey, largest in world, burned; loss, \$100,000. San Francisco ordinance approved, requiring 60,000 Chinese to remove to south part of city. French Ministry resigns.

15.—First fire in Chesaning for 20 years; loss, \$18,000. International Labor Conference, called by Emperor William, meets in Berlin. News of Afghan revolution, and defeat of rebels.

16.—New Hungarian and French Cabinets; Szapary and De Freycinet, Premiers. 100,000 English miners on strike.

17.—Rust saw mill burned, Bay City; loss, \$50,000. Fire in newly timbered main shaft of West Vulcan mine, Norway, U. P.; \$250,000 loss. Bowen-Merrill Publishing Co. burned out, Indianapolis; 12 firemen killed, 16 wounded, \$150,000 loss. Bismarck and son Herbert resign. 30,000 striking dockmen parade in Liverpool.

18.—Bismarck's resignation accepted; Prussian Ministry resigns. Immense breaks in Lower Mississippi levees.

19.—Plummer & Co., New York dry-goods dealers, fail for \$1,000,000. Von Caprivi succeeds Bismarck as Chancellor of German Empire; Prussian Ministry reconstructed.

20.—Blair education bill finally defeated in the Senate. N. Y. Court of Appeals affirms constitutionality of execution by electricity. Panic reported in Switzerland, from fear of avalanches.

21.—Fire in Elk Rapids chemical works; loss, \$30,000. Bismarck refuses title and decoration from Emperor.

22.—Four suicides in Chicago. Political student riot in St. Petersburg; 500 arrested. Steamer Gwendoline foundered off British coast; 7 drowned. Cyclones do great damage in South Carolina. British steamer Virent abandoned at sea; 15 lost.

23.—Botanical laboratory State Agricultural College, Lansing, burned; loss, \$10,000. Great flood in Ohio river.

24.—Prairie fires near Wichita, Kas., cause \$100,000 loss. Hotel burned, Kearney, Neb.; 1 life and \$150,000 loss.

25.—Accident on Northern Pacific; 1 killed, 6 hurt.

26.—Vosburg's planing mill, Three Rivers, burned; \$15,000 loss. \$50,000 elevator fire at Kansas City, Mo.

27.—Tornado in Kentucky and other States; parts of Louisville wrecked, 120 lives lost, 300 hurt, 400 buildings ruined, loss \$2,000,000. Metropolis, Ill. destroyed, with much loss of life and property. Earthquake in New Hampshire.

29.—Maryland State Treasurer defaults for \$150,000. Berlin Labor Conference ends.

30.—Government party carries Portuguese elections.

31.—St. John's convent burned, Milwaukee; loss, \$70,000. Greenville, Miss., for first time reached by flood.

APRIL.

1.—Six boys killed by sand caving near Vernon, Texas.

2.—New Portuguese Cabinet. Pan-American Congress unanimously adopts resolution for international coinage. Coal-mine explosion at Wilkesbarre, Pa.; 3 killed, 6 hurt. Edw. H. Harvey appointed Pension Agent at Detroit. Loud plaving mill, Oscoda, burned; loss, \$15,000.

3.—Plumbers' strike in Chicago. Greeley homestead, Chappaqua, N. Y., burned. Col. H. M. Duffield elected Commander Michigan G. A. R. Fire at Ithaca, Mich.; \$4400 loss.

4.—Gas explosions in oil-tunnel near Santa Paula, Cal.; 6 killed. Flood in lower Mississippi.

5.—Lewis A. Grant of Minn. made Assistant Sec'y of War, and Gen. Miles promoted to Major-General, vice Crook, deceased. Business part of Theresa, N. Y., burned; \$200,000 loss. Twelve negroes drowned from raft near Vicksburg, Miss. News of terrible hurricanes on the Pacific.

6.—Confederate Decoration Day.

7.—Carpenters' and bricklayers' strike in Chicago. Sisters & Sons, New York and Detroit brokers, fail for large sum.

8.—Wind-storms in Michigan, Ohio, and Indiana; much damage at Kalamazoo, Charlotte, and elsewhere; some loss of life in other States. Strikers' riot in Vienna.

9.—U. S. Rolling-stock Co. burned out at Decatur, Ala.; loss, \$300,000. Liberty of press, etc., proclaimed in Brazil. Four murderers hanged in Pennsylvania.

10.—Anti-Carlist demonstration in Madrid.

11.—More disturbances in Vienna. Slight earthquake at Dover, N. H.

12.—Samoan treaty signed in Berlin. First cable-car line opened in Washington.

13.—Fire in Plankinton Hotel, Detroit; loss, \$125,000. Steamer on Saginaw river strikes bridge and loses upper works; 8 drowned. Col. Bermudez elected President of Peru.

14.—Strike of carpenters at Indianapolis; formidable strikes abroad. Northern Pacific shops, Ellensburg, Wash., burned; loss, \$100,000.

15.—News of unsuccessful revolution in Afghanistan. Lockout at coke-ovens, Scotland, Pa.; 1200 idle. Bousfield wooden-ware works, Bay City, burned; loss, \$130,000.

16.—Most building trades out in Chicago. Roof of weaving-mill falls, Bergamo, Italy; 17 girls killed.

17.—Gas employees strike in Chicago.

18.—Last day of Castle Garden as immigrant station. Hebard saw-mill burned, Pequaming, U. P., loss \$50,000, and Thompson Handle Co.'s factory, Kalkaska, \$20,000.

19.—Pan-American Congress adjourns.

20.—Dedication of \$30,000 M. E. church, Lansing.

21.—Riots between troops and strikers, Troppeau, East Silesia. Harrodsburg, Ky., burned; \$150,000 loss. Deaconesses' Home dedicated, Detroit. \$40,000 fire at Charlotte. News of wreck of steamer Bilboa in North Sea; 15 lost.

22.—Opening of Detroit Floral and Musical Charity Festival, for four days' exhibit—a grand success. Mine explosion, Rock Springs, Wyo.; 80 killed.

23.—Business quarter Greenwood, Miss., burned; \$124,000 loss. \$200,000 fire in Rochester, N. Y. News of battle between French and Dahomians; 50 French wounded, 500 Dahomians killed.

24.—Earthquake in San Francisco and other parts of California. Five sisters suicide in Moscow; fear of arrest as Nihilists. Crisis in Brazilian Cabinet.

25.—President approves World's Fair bill.

26.—Ocean steamer Oneida wrecked on Lanch Island; 77 lost. Great labor demonstration in Montreal.

27.—Stanley welcomed in London.

28.—U. S. Supreme Court declares unconstitutional State laws directing seizure of liquors in original packages. Chicago strikers becoming riotous. Arbitration treaty signed between United States, Central American States, Bolivia, Ecuador, Hayti, and Brazil.

29.—Twelve Anarchists arrested in Paris.

30.—Battle of police and workmen at great labor meeting near The Hague.

MAY.

1.—Labor demonstrations in Detroit and many cities; general carpenters' strike here and elsewhere; four-mile procession in Chicago, 10,000 in Louisville parade. Bold diamond robbery in Cincinnati; \$5000 worth stolen.

2.—International copyright bill defeated in House. More strikes in Chicago. Strikers' riots abroad.

3.—Sash, blind, and door-men strike. Seventy-eight temperance crusaders arrested in Lathrop, Mo.

4.—Great labor parade in London; 150,000 men in line. Strike of building trades ends in Ottawa, Can. Business part of Gilboa, N. Y., burned; \$150,000 loss. Government triumph in elections for Paris Municipal Council.

6.—Insane asylum burned near Montreal; over 100 lost. Jos. Gingrass killed by electricity, Detroit. Cyclone in Hood Co., Texas; 12 killed.

7.—Fires: Singer Sewing-machine Factory, Elizabeth, N. J.; poor-house at Preston, N. Y.,

25 lives lost; Saranac, Mich., \$12,000; winding-house Abraham colliery, London, 350 miners entombed.

8.—Geo. W. Steele appointed Governor of Oklahoma.

9.—Steamship takes first load of corn from Galveston for Liverpool direct. Poor-house and insane asylum near Utica, N. Y., burned; loss, 13 lives. Use of Russian language in Finland schools made compulsory.

10.—Cloud-burst and cyclone at Akron, O.; 100 houses destroyed. Slave-ship and slave-cargo captured off African coast by British steamer.

12.—Strike of 4000 tube-workers at McKeesport, Pa.

13.—Factory explosion Avigliana, Italy; 14 killed.

14.—Chas. H. Smith, prominent business man, Detroit, disappears.

15.—Flood at Kalamazoo. Explosion in Hartford mine, Ashley, Pa.; 29 killed.

16.—New Japanese Cabinet. News of burning of Tomsk, Siberia, with great loss of life. Ferry-boat capsized near Ratibor, Silesia; 36 drowned. John G. Carlisle elected Senator from Kentucky.

17.—Diggins mill-yard burned, Cadillac; \$20,000 loss. Fire and explosion at Havana, Cuba; 36 killed.

21.—Five miners killed by falling rocks in Calumet and Hecla mine. Tariff Bill passes the House.

22.—News of insurrection at Puerto Alegre, Brazil; 26 killed.

25.—Row-boat upset at Fall River, Mass.; 8 drowned.

26.—Great storms and floods in Germany; 17 lost.

27.—Student-circus riot at Ann Arbor. John W. Davis, Dem., elected by Legislature Governor of Rhode Island.

28.—River and Harbor Bill passes House.

29.—Kepler flouring-mill burned, St. Louis; \$150,000 loss.

30.—Railroad accident, Oakland, Cal.; 13 killed. Garfield Memorial dedicated, Cleveland. Spring Palace, Fort Worth, Texas, burned. Corner-stone of Memorial Arch laid, New York City.

JUNE.

2.—Eleventh Census begun.

3.—Bradshaw, Neb., destroyed by cyclone; 15 killed. Earthquake in Lima, Peru. Treaty signed to suppress anarchy in Germany, France, Russia, and Switzerland. Duc d'Orleans pardoned, but conducted to the frontier.

4.—Sylvester Pennoyer, Dem., re-elected Governor of Oregon. Powder-house explosion near Mansfield, O. Street-car strike in Columbus, O.

5.—House of Commons rejects the Channel tunnel bill.

6.—Sleeping-car near Louisville goes down 30-foot embankment; many injured. Railroad accident near Rockford, Ill.; 5 killed. Ten persons burned to death near Warsaw, Poland.

8.—Mail robbery on North Dakota train. \$90,000 fire at Chatworth, Ill. Cable-cars collide in Chicago; 5 hurt. Boat capsized in Boston harbor; 7 drowned.

9.—Collision on Wabash R. R., Warrenton, Mo.; 7 killed.

10.—Theatre fire in Brooklyn, N. Y.; \$80,000 loss. House of Lords defeats bill allowing women to serve on London City Council.

11.—News of burning of Ufaelsk Newjansk, in Ural Mountains, Russia; 40 lives lost.

14.—Louis Philippe declared heir to throne of Portugal.

16.—Explosion Hill Farin mines, near Dunbar, Pa.; 30 killed.

18.—Mrs. Hannah Bradley killed by runaway team on Jefferson avenue, Detroit. Stanley re-appointed by King of Belgium Governor of Congo Free State, from 1891.

22.—Revolution in San Salvador; leader and 22 others killed; President Menendez dies of heart disease next day; Gen. Ezeta Provisional President.

23.—New Constitution of Brazil promulgated. Fort de France, Martinique, burned; 5000 homeless, \$3,000,000 loss.

27.—Ex-Senator T. W. Palmer elected President of World's Fair Commission. Dutch steamer sunk by collision in Bay of Biscay; 6 lost.

29.—Accident on Mo. Pacific R. R. near Nevada, Mo.; many injured, 2 fatally.

30.—Fire in Standard Oil refinery, Louisville; 7 hurt, 3 fatally.

JULY.

1.—Disastrous fire at Seattle, Wash.

2.—Haverhill, Mass., celebrates 250th anniversary. Peabody Institute, Danvers, Mass., burned; loss, \$75,000.

3.—President signs bill admitting Idaho. Spanish Ministry resigns.

4.—New Spanish Cabinet; Del Castillo, Premier.

6.—Dedication of First Reformed (Zion) church, Detroit. Large fire, East Tawas.

7.—Gale at Fargo, N. D.; 9 killed, many hurt.

9.—Roseville, N. Y., burned. Heavy winds at Cleveland; four electric masts blown down.

10.—President signs bill admitting Wyoming. Business part of Ithaca, Mich., burned, \$30,000 loss; also Globe tobacco works, Cincinnati, \$130,000. News of drowning of 59 persons during launch of vessel at Osaka, Japan, and killing of 700 by hurricanes in Arabia.

11.—Explosion on steamer Tioga in Chicago river; 36 killed and injured. Riot at Griffin, Ga.; 18 killed and wounded.

12.—Marriage of Henry M. Stanley and Miss Dorothy Tennant in Westminster Abbey. 2000 houses burned in Constantinople.

13.—Intense heat in nearly all parts of the country. Cyclone in Minnesota; steamer sunk near St. Paul, 100 lives lost. \$600,000 fire in Philadelphia.

14.—Free-coinage bill signed by President. Explosion of King's powder-mills near Cincinnati; 10 killed, many hurt. Yellow fever in Havana. 105th anniversary of fall of Bastille celebrated in Paris. San Salvador proclaimed in state of siege.

15.—\$1,000,000 fire in Minneapolis.

16.—Battle between troops of San Salvador and Guatemala; latter defeated.

17.—Col. O. L. Spaulding appointed Asst. Sec'y of the Treasury. Steamers City of Detroit and Kesota collide near Detroit; latter sunk, \$150,000 loss.

18.—Cupola bursts in New York foundry; 16 men burned with red-hot metal.

19.—Fire in Western Union Telegraph offices, New York City; loss, \$100,000.

21.—Slonni, Russia, partly destroyed by hurricane; 19 killed.

22.—Destructive cyclone in and about Fargo, N. D.

23.—State militia encampment begins at Battle Creek. Fire-damp explosion, St. Etienne, France; 98 killed, 35 wounded.

24.—Two battles between San Salvadorians and Guatemalans; former defeated. American schooner Wm. Rice sinks on voyage from Cape Ann to Ireland; 16 lost. Tornado South Lawrence, Mass.; several killed.

27.—Wallace, Idaho, burned; 1500 people homeless, \$150,000 loss. Revolution in Buenos Ayres against Argentine Republic; over 1000 killed, 5000 wounded.

28.—Street-car employees strike in Grand Rapids. Unsuccessful revolution in San Salvador. Riot in Armenian Cathedral, Constantinople. Monitor plow-works burned, Minneapolis; loss, \$150,000.

29.—Excursion steamers collide near Baltimore; great loss of life. Central-American war ends.

30.—Fire-damp explosion near Paris, France; 120 killed. Four firemen injured in Chicago fire. Business center Seneca Falls, N. Y., burned.

31.—State Conventions of Prohibition and Union Labor parties at Lansing.

AUGUST.

1.—P. O. Department excludes Tolstoi's "Kreutzer Sonata" from the mails. Famine in the Soudan; 100 dying daily.

2.—Col. Bermudez proclaimed President of Peru.

3.—Revolutionists defeated in San Salvador; Gen. Rivas shot.

4.—Great fire in Louisville; 25,000 bbls. of whisky burned; loss, \$800,000. News of cholera at Mecca; deaths, 500 a day. Great wind and hail-storms in Minnesota and South Dakota. What Cheer, Iowa, burned; \$100,000 loss.

5.—Great Anti-Mormon victory at Utah elections. French and English treaty, giving latter protectorate over Zanzibar. Execution by electricity of the murderer Kemmler, in Auburn State prison, N. Y.

6.—Corner-stone of Utah University laid at Ogden by Bishop J. H. Vincent. Thos. G. Jones, Dem., elected Governor of Alabama.

7.—President Celman of Argentine Republic resigns, and Pellegrini succeeds.

8.—Congressional "original package" bill approved by President. Strike of Knights of Labor on N. Y. Central R. R.

12.—National Encampment G. A. R., Boston; 40,000 veterans parade.

13.—New silver law takes effect. Bellaire, O., goblet-works burn; \$50,000 loss. Great whisky and distillery fire in Louisville; \$1,000,000 loss.

14.—Storm at Colorado Springs causes much loss of life and property.

15.—Anti-lottery bill passes the House. Explosion Government powder-mills at Canton, China; 1000 killed, 200 houses destroyed.

17.—Robbery of express train near Sedalia, Mo.; \$30,000 taken. Riot on train near Cincinnati; 6 killed. Dedication of soldiers' memorial tablet at State Normal school, Ypsilanti.

18.—Railroad accident near Trinidad, Colo.; 7 killed, 14 wounded. Parliament prorogued.

19.—Accident on Old Colony R. R., near Boston; 15 killed, 25 hurt. Cyclone at Wilkes-barre, Pa., kills 15 persons, wounds 200.

21.—Great storm in Philadelphia. Fred W. Crimmins, reporter, shot and dangerously wounded by Italian fruit-vender, Detroit.

22.—Railroad accidents at Cascade, Cal., Lyons, Colo., and near Reading, Pa., kill 3, 8, and 4 persons respectively.

24.—Theatre riot at Huntington, W. Va.; 1 killed.

26.—Exposition opens, Detroit. Commercial treaty between Turkey and Germany. Tokay, Hungary, burned; 1000 families homeless.

27.—Knights of Labor boycott 100,000 brick-moulders, New York City.

28.—Republican State Convention in Detroit. Treaty of peace between San Salvador

and Guatemala. Keneshma, Russia, burned; loss, 8,000,000 rubles.

29.—Gen. Barrundia shot by Guatemalan soldiers on U. S. vessel at San Jose, Gua. Dr. O. W. Holmes 81 years old.

30.—Kropowski, Russia, burned.

31.—40,000 men in labor parade, Melbourne, Aus. Six incendiary fires in Philadelphia.

SEPTEMBER.

1.—Mine explosion Boryslav, Austria; 80 killed.

2.—C. S. Page, Rep., elected Governor of Vt.; Jas. P. Eagle, Dem., Gov. of Arkansas. Schwarz building falls, New Orleans; 10 killed. Steamer Portuense founders in the West Indies; 10 drowned. 6000 carpenters out in Chicago. Train robbery near Mobile.

4.—Fire in Salonica, Turkey; 12,000 houses and most public buildings burned. Fall of bridge at Prague drowns 30. State Democratic Convention in Lansing.

5.—Detroit Exposition closes its second successful exhibit. Dynamite explosion La Rochelle, France, kills 10.

6.—Railroad accident Adobe, Colo.; 5 killed. Blast explosion, Spokane Falls, kills 18. Floods in Bohemia; 45,000 homeless.

8.—Edw. C. Burleigh, Rep., re-elected Governor of Maine.

9.—State Democratic Convention at Lansing. Marshall has a \$100,000 fire.

11.—Francis E. Warner, Rep., elected Governor of Wyoming.

13.—Triple Alliance (Germany, Austria, Italy) extended to 1897. Great floods in New York and Ohio, and killing frosts in Iowa and westward.

14.—News of floods and cholera in China.

16.—Alhambra, Spain, partly burned. Mine explosion in Rhenish Prussia; 25 killed.

17.—New York Central R. R. strike declared off.

19.—President signs Anti-lottery bill. Fires: Business part of Whitehall, \$100,000 loss; 11 buildings, South Haven, \$70,000. J. D. Rockefeller gives \$100,000 more to Baptist University in Chicago. Wreck on Reading R. R.; about 50 killed. News of loss of Osman Ghazi and Ali Pasha on Japanese steamer.

20.—Greeley statue unveiled in front of Tribune building, New York City.

21.—Election riot at Goa, India; 17 killed.

22.—Col. Eugene Robinson appointed Brigadier-General of Michigan troops.

23.—Nine shocks of earthquake at Columbia, S. C.

24.—Corner-stone laid of Disciple church, Cass Park, Detroit. \$3700 fire at Saginaw. Great floods in France.

26.—Incendiary fire at Frankfort, Mich.; \$11,000 loss. E. Burd Grubb of N. J. nominated to succeed Minister Palmer in Spain, and Edwin H. Conger of Iowa Minister to Brazil.

28.—Ex-Governor Felch 86 years old. Railroad accident, Pleasant Valley, Pa.; 9 killed, many hurt. Fowler Bros. packing-house burned, Chicago; loss, \$690,000.

29.—Another attempt upon the Czar's life.

30.—Tariff bill passes Senate. \$250,000 fire in Chicago.

OCTOBER.

1.—Congress adjourns. President signs Tariff bill.

2.—Republican victory in Idaho; 2000 majority.

3.—George Bancroft 90 years old. Great excitement in Oklahoma over location of capital.

6.—Tariff law takes effect. German Day in many cities; brilliant parade in Detroit.

7.—Explosion of Dupont powder-mills, near

Wilmington, Del.; 11 killed, 20 hurt, great loss of property. Destructive prairie fires in South Dakota.

8.—Trial of Ald. Tierney, Detroit, for bribery, begins. Boiler explosion in saw-mill, Muskegon; 6 injured, 1 fatally. Great parade of Federal and Confederate soldiers, Knoxville, Tenn.

9.—O'Brien and Dillon escape. Explosion in Pyrotechnic school, Bourges, France; 5 killed, 40 injured.

10.—Michigan Supreme Court decides local option law constitutional.

12.—Sands's shingle-mill and salt-block burned, Manistee; \$100,000 loss. Dillon and O'Brien land in France.

13.—Dedication of Hackley Public Library, Muskegon; address by ex-Senator Palmer.

15.—Detroit Journal military prize-drill, Detroit. Leland Hotel burned, Syracuse, N. Y.; 4 lives and \$200,000 lost.

16.—Wm. Moore fatally shot while beating wife, by Patrolman O'Donnell, Detroit. Failure of R. G. Peters, Manistee lumberman, for \$2,500,000.

17.—Shops of Tennessee penitentiary burn; \$275,000 loss.

18.—First Republican victory at Tacoma, Wash.

19.—First locomotive to the top of Pike's Peak. Liberal triumphs in Belgian elections.

20.—Steamer Annie Young burns off Lexington, Mich.; 9 lives lost.

21.—News of three American locomotives landed at Jaffa (old Joppa), for railway to Jerusalem.

22.—Three fatal railroad collisions. Successful test of telephone Erie to New York, 500 miles. Dr. Brodie memorial meeting in Detroit.

23.—Jury disagree on Tierney trial. Earthquake at Cape Girardeau, Mo.

25.—Municipal Improvement Association formed, Detroit. Fire in Canton, China; 100 houses burned.

26.—134th anniversary John-street M. E. church, New York City. Fire in Mobile; loss, \$800,000. St. Joseph's (Catholic) church dedicated Port Huron. Von Moltke 90 years old.

27.—Government defeats in Greek elections.

28.—\$200,000 fire at Eureka Springs, Ark.; \$100,000 loss, Eureka Junction, Wash. Alcona county poor-house burned; \$5000 loss.

29.—Last day of mission in Casino Tabernacle, Detroit. Oscar Woolfolk, murderer of his family of 9, executed at Perry, Ga. Political troubles in Canton of Ticino, Switz.

30.—First day of Central Gospel Mission, Detroit. Speaker Reed in Detroit, addresses great Republican rally. Steamer Viscaya and schooner Hargreaves collide and sink off Barnegat; 67 drowned. Dutch Parliament declares king incapable of reigning. Population of United States announced as 62,480,540.

31.—Chillicothe, Ill., mostly burned; loss, \$200,000.

NOVEMBER.

1.—Corner-stone laid of great W. C. T. U. Temple, Chicago.

2.—Dillon and O'Brien land in New York. Government powder-mills blow up at Tai Ping Foo, China; 300 killed, and all houses near wrecked.

3.—Two San Francisco hotels burned; loss, over \$250,000. \$75,000 fire in Philadelphia. Two Chinese men-of-war founder in gale; 500 lost. 26,000 cholera deaths reported from China.

4.—General elections in the United States; Democratic victories in nearly all parts. New iron steamer Reynolds, on fire, beached near Colchester, Ont., and becomes a wreck.

5.—Bliss saw-mill burned, Saginaw; \$30,000 loss.

6.—H. M. Stanley and wife arrive in New York. Fires at Buffalo, \$250,000 loss; Philadelphia, \$185,000; Truckee, Cal., \$110,000.

7.—Fire at Owensboro, Ky.; \$150,000 and C. A. Guernsey of Grand Rapids lost. Winslow, Ind., burned.

8.—President proclaims Thanksgiving Day.

9.—Unitarians occupy new church corner Woodward avenue and Edmund Place, Detroit. Unsuccessful revolt at the capital of Honduras. Train overturned at Okayan, Japan; 26 killed and wounded.

10.—Masonic Fair opened, Grand Rapids. British torpedo cruiser wrecked off Cape Finisterre; 173 lost. Steamer Ocean Wave sunk on Lake Ontario.

11.—Chrysanthemum show opened, Detroit. Gov. Luce appoints Thanksgiving Day. Great financial flurry in Wall street, New York. Railway accident near Taunton, Eng.; 10 killed.

12.—Ferry-boat capsized near Biarritz, France; 55 drowned. Car-shed and stables burned, Sioux Falls, S. D.; 9 horses and \$25,000 loss. Train goes through trestle near Salem, Ore.; 5 killed. Student-citizen riot at Ann Arbor; 1 killed.

14.—Birchall hanged at Woodstock, Ont. R. R. collision near Florence, Pa.; 2 killed, 16 hurt. Another on B. & O. R. R., killing 2. Dynamite explosion near Lima, O., kills 4 and wounds 4. Baring Bros., the great London bankers, in financial straits.

15.—People's Savings Bank organized, Grand Rapids. Jackson Morning Patriot sold. Train derailed near Salonica, Turkey; 30 killed, 40 hurt. Comet found by Prof. Zona.

16.—Treaty of peace signed between San Salvador and Guatemala. Alarm of Indian uprising in North Dakota. Church riot in Bistriz, Transylvania; 6 killed, 16 hurt.

17.—Freight train goes through bridge into Kaw river at Kansas City; 12 drown. Albert A. Smith, New York broker, proves forger for \$350,000. Boiler explosion at Reading, Pa.; 3 killed.

18.—Gov. F. E. Warren elected Senator from Wyoming. Launch of U. S. cruiser Maine, at Brooklyn Navy Yard.

19.—Gen. John B. Gordon elected Senator from Georgia. Livery stable burned, Evanston, Ill.; 17 horses and \$40,000 lost. New Holland church dedicated at Grand Rapids. \$100,000 robbery in Chicago.

21.—H. M. Dubois shot and killed at Highland Park by Henry Hull.

22.—New brick building at Jersey City falls; many injured, some fatally.

23.—Indian troubles thickening in the Northwest; much movement of troops.

24.—Five ice-houses burned near Cadillac; loss, \$35,000.

25.—Parliament meets. Financial crisis in Buenos Ayres.

26.—Fire in Allan foundry, Detroit; \$10,000 loss. Battle between Indians and troops near Fort Keogh, Mont. Riot at Mannington, W. Va.; 2 killed. Forty fishing-boats sunk off coast of Norway; 28 lives lost.

27.—Fire in Evening Sun office, Detroit; loss, \$10,000. Fall of grand stand, Brooklyn, N. Y.; 50 injured.

28.—Stanley lectures in Detroit. Senator Pugh of Alabama re-elected. \$100,000 dwelling burned, Newton, Ct. Jamison & Co., large Philadelphia brokers, assign. Earthquake in Danube valley.

30.—Indian scare in Minnesota. Jefferson barracks stables burned, St. Louis, with 66 horses and mules; loss, \$18,000. Unitarian church dedicated, Detroit. Public debt in-

creased this month \$9,130,819.51; cash in Federal treasury, \$675,860,186.82.

DECEMBER.

1.—Congress meets. Potts Salt & Lumber Co., Detroit, assign. Report of frost and snow on Mediterranean shores, first in 20 years; heavy snows in Spain. \$300,000 fire at Manayunk, Pa. Explosion of powder-house at Guthrie, O. T.; none killed.

2.—Annual meetings State S. S. Convention in Lansing and State Horticultural Society in Kalamazoo. Ellis Miller, murderer, hanged in Ohio penitentiary.

3.—Great fire in Scotten tobacco factory, Detroit; 2 firemen killed, 4 hurt, loss \$250,000. Insurance \$107,000. Seven engines and other property C. & W. M. R. R. burned at Holland, Mich.; loss, \$25,000. Copyright bill passes House.

4.—Fall of blast-furnace Joliet, Ill.; 9 killed, 6 dangerously hurt. Tank explosion in Cincinnati; 3 fatally injured. Failure for \$1,000,000 of Revis, Russell & Co., London, and for \$800,000 of the Rittenhouse woolen factory at Passaic, N. J.

5.—Four business blocks burned at Pittsburg; loss, \$210,000. Sage Lumber Co., Albany, N. Y., swindled of near \$100,000 by book-keeper, who suicides. Taylor House, etc., burned at Saginaw; loss, \$13,500. Fire at Newaygo, \$28,000 loss. Sharp shocks of earthquake at Lockwood, Mo.

6.—Frederick Stearns presents his Japanese collection to Detroit Art Museum. Disappearance of Lewis D. Sanborn, Saginaw; financial difficulties. Collision near New York of ocean-steamers La Champagne and Lisbonese; none lost. Harrington, chief of Irish National Land League, in Detroit. Shipload of Chinese sent back from San Francisco.

7.—Tenth National Convention Federation of Labor opens, Detroit. Rust House burned, Farwell, Mich. Fire at Three Rivers. Block burned, Anderson, Ind.; \$36,000 loss. Boulangist candidate elected to Paris Municipal Council.

8.—National Protective Association of Retail Clerks formed, Detroit. Kermess opens. Two heavy failures in New York City. Will filed in New York of Dan'l B. Fayerweather, giving \$2,100,000 to 19 colleges and one theological school. Oklahoma settlers suffering. Grand Central depot, Chicago, dedicated. Evansville, Ind., foundrymen fail for \$100,000. Cyclone near Monroze, Ga.; immense damage, many killed.

9.—Thermometer 30° below at Lyndonville, Vt. James Crosbie shoots and kills Matthew O'Shea, Bay City. Eben E. Rexford's dwelling burned, Appleton, Wis. Democratic Mayor elected in Boston. \$700,000 and \$200,000 failures in Boston; \$192,000 failure, San Francisco.

10.—Linseed-oil works burned, San Francisco; loss, \$200,000. Albert Baldwin killed by accident at Port Huron tunnel.

11.—Col. J. L. M. Irby elected as Farmers' Alliance candidate to U. S. Senate from South Carolina. \$75,000 fire in New York. Ex-State Senator Arnold shoots himself at Unadilla, N. Y., for defeat at late elections. Second Reformed church dedicated, Grand Haven.

12.—Prince Lubelsky's porcelain factory near War saw burned; 8 killed. Building blown down, Brooklyn, N. Y.; dwelling crushed and girl killed.

13.—Saw-mill near Big Rapids blew up; 2 killed, 3 hurt. Dorrance Building burned, Providence, R. I.; 2 firemen injured. Party struck by locomotive, Bristol, Pa.; 4 killed, 2 wounded. Fire in Buchtel College, Akron, O.; 2 young ladies burned to death, 8 seriously.

14.—John Corrigan, aged 14, accidentally and fatally shoots Willie Paige, boy of 10, Detroit. Central school building burned, Muskegon; loss, \$75,000. Dardanelles and Monticello, Ark., burned; loss, \$150,000.

15.—Casino building, Detroit, leased to Wonderland, and re-leased for city mission. Sitting Bull and 11 others killed, in attempt by Indian police to arrest him. Annual exhibit Mich. Poultry Association opens, Battle Creek. Lorillard Brick Co., New York and Keyport, N. J., fail for \$1,000,000. Giant-powder explosion near Wakefield, U. P.; 2 killed, 3 injured.

16.—Livery stable burned with 6 horses and 125 bales of cotton, Luling, Tex. Burton Block burned, Chicago; loss, \$80,000. Five persons swept by high wind from Alpine height over precipice and killed. Three priests drowned through ice at Grenoble, Switz.

17.—Heavy snows in Western Pennsylvania and other States; business practically suspended in Pittsburg. Senator Gorman's dwelling burned, Laurel, Md. Colliery accident at Hornu, Belgium; 18 killed. Floods on Vancouver Island, B. C.; \$500,000 loss. Fire in Ninde M. E. church, Detroit; small damage. Roof of machine-works, Roanoke, Va., fell under weight of snow; 1 killed, 8 injured, loss \$100,000.

18.—Gov. Geo. L. Shoup and W. J. McConnell elected Senators from Idaho for short terms; Fred T. Dubois for full term 1891-7. Great snow-storms continue in Atlantic and Southern States; immense damage and block-

ing of railroads. Two murderers hanged at Columbus, and one at Welland, Ont. S. A. Kean, Chicago banker, falls. Active Indian hostilities in Colorado. Holland, Mich., first lighted by electricity. Fire at Waycross, Ga.; loss, \$80,000.

19.—La Montagne, murderer, hanged at Sherbrooke, Que.; sheriff died from excitement. Four Indian murderers hanged at Missoula, Mont. Accident on Wheeling & Lake Erie R. R. at Bolivar, O.; 6 killed, many hurt. Another on Intercolonial R. R., St. Joseph's, Que.; 6 killed, 60 injured. Kolb school-house, West Bay City, dedicated. Five laborers drowned by coal-slide on wharf, Halifax, N. S. Snow-storm throughout Great Britain.

20.—Car-heater explodes on C. & G. T. R. R., Battle Creek; 9 receive burns or otherwise hurt. Signor Succ, New York City, ends 45-day fast. Fyraud and Gabrielle Gompard convicted of strangling Notary Gouffe, Paris.

21.—M. E. church dedicated, Howell, St. Casimir (Polish) Catholic church dedicated, Detroit. Thermometer 22° below at Saranac Lake, N. Y. Fires: Grace Episcopal church, Detroit, \$1000 damage; St. Bernard's Catholic church, New York, \$75,000 loss; propeller Missouri, near Sandwich, Ont., insured for \$7000.

22.—State Teachers' Association meets in Grand Rapids. Casino roller-rink burned, Chicago; loss, \$60,000. Parnell's candidate for Parliament defeated in Kilkenny. Strike of railway men in Scotland. Indian troubles in South Dakota considered over.

THE UNITED STATES.

The Federal Government.

EXECUTIVE DEPARTMENT.

President—BENJAMIN HARRISON, of Indiana. Salary, \$50,000 a year.

Vice-President—LEVI P. MORTON, of New York. Salary, \$10,000.

Secretary of State—JAMES G. BLAINE, of Maine. Salary, \$8000.

Secretary of the Treasury—WILLIAM WINDOM, of Minnesota. Salary, \$8000.

Secretary of War—REDFIELD PROCTOR, of Vermont. Salary, \$8000.

Secretary of the Navy—BENJAMIN F. TRACY, of New York. Salary, \$8000.

Secretary of the Interior—JOHN W. NOBLE, of Missouri. Salary, \$8000.

Secretary of Agriculture—JEREMIAH M. RUSE, of Wisconsin. Salary, \$8000.

Postmaster-General—JOHN WANAMAKER, of Pennsylvania. Salary, \$8000.

Attorney-General—W. H. H. MILLER, of Indiana. Salary, \$8000.

Commissioner of the General Land Office—LEWIS A. GROFF, of Kansas. Salary, \$4000.

Commissioner of Patents—CHARLES E. MITCHELL, of Connecticut. Salary, \$4500.

Commissioner of Pensions—GREEN B. RAUM, of Illinois. Salary, \$5000.

Commissioner of Indian Affairs—THOMAS J. MORGAN, of Rhode Island. Salary, \$4000.

Commissioner of Education—WM. T. HARRIS, of Massachusetts. Salary, \$3000.

Commissioner of Labor—CARROLL D. WRIGHT, of Massachusetts. Salary, \$5000.

Commissioner of Railroads—HORACE A. TAYLOR, of Wisconsin. Salary, \$4500.

Superintendent of Census—ROBERT P. PORTER, of New York. Salary, \$6000.

Director Geological Survey—JOHN W. POWELL, of Illinois. Salary, \$5000.

Civil Service Commissioners—CHARLES LY-

MAN, of Conn., President; THEO. ROOSEVELT, of New York; HUGH S. THOMPSON, of S. C. Salary, \$3500. *Chief Examiner*—WM. H. WEBSTER, of Conn.; \$3000. *Secretary*—JOHN T. DOYLE, of New York; \$2000.

U. S. SUPREME COURT.

Chief Justice—MELVILLE W. FULLER, of Illinois, appointed 1888. Salary, \$10,500. Eight Associate Justices, at \$10,000: Stephen J. Field, California, 1863; Joseph P. Bradley, New Jersey, 1870; John M. Harlan, Kentucky, 1877; Horace Gray, Massachusetts, 1881; Samuel Blatchford, New York, 1882; Lucius Q. C. Lamar, Mississippi, 1888; David J. Brewer, Kansas, 1889; Henry B. Brown, Michigan, 1890.

U. S. ARMY.

[The maximum force allowed the army by existing law is 2155 commissioned officers and 25,000 enlisted men.]

Major-Generals—John M. Schofield (commander), Oliver O. Howard, Nelson A. Miles. Pay, \$7500 each.

Brigadier-Generals—David S. Stanley, John Gibbon, T. H. Ruger, Wesley Merritt, John R. Brooke, Alex. McD. McCook. Pay, \$5500 each.

All the members above named receive an allowance for quarters, fuel, and forage, in addition to their pay proper.

U. S. NAVY.

Admiral—David D. Porter. Pay, \$13,000.

Rear Admirals—Lewis A. Kimberly, Bancroft Gherardi, Daniel L. Braine, George E. Belknap, David B. Harmony, A. K. Benham. Pay, \$6000.

Ten Commodores on the active list receive \$5000 each; Captains, \$4500 each; Commanders, \$3500 each.

THE SENATE—FIFTY-FIRST CONGRESS.

President—LEVI P. MORTON.

Chaplain—Rev. J. G. BUTLER, D. D.

Secretary—Gen. ANSON G. MCCOOK.

Chief Clerk—CHARLES W. JOHNSON.

Sergeant-at-Arms—WM. P. CANADY.

Executive Clerk—JAMES R. YOUNG.

Senators, at \$5000 each and mileage:

ALABAMA.—James L. Pugh, D., term expires 1891; John T. Morgan, D., 1895.

ARKANSAS.—James K. Jones, D., 1891; James H. Berry, D., 1895.

CALIFORNIA.—Leland Stanford, R., 1891; George Hearst, D., 1893.

COLORADO.—Henry M. Teller, R., 1891; E. O. Wolcott, R., 1895.

CONNECTICUT.—Orville H. Platt, R., 1891; Joseph R. Hawley, R., 1893.

DELAWARE.—George Gray, D., 1893; Anthony Higgins, R., 1895.

FLORIDA.—Wilkinson Call, D., 1891; Samuel Pasco, D., 1893.

GEORGIA.—Joseph E. Brown, D., 1891; Alfred H. Colquitt, D., 1895.

IDAHO.—George L. Shoup, R., 1891; W. J. McConnell, R., 1893. [Fred T. Dubois, R., 189-197.]

ILLINOIS.—Charles B. Farwell, R., 1891; Shelby M. Cullom, R., 1895.

INDIANA.—Daniel W. Voorhees, D., 1891; David Turpie, D., 1895.

IOWA.—James F. Wilson, R., 1895; Wm. B. Allison, R., 1897.

KANSAS.—John J. Ingalls, R., 1891; P. B. Plumb, R., 1895.

KENTUCKY.—J. G. Carlisle, D., 1895; J. S. C. Blackburn, D., 1897.

LOUISIANA.—James B. Eustis, D., 1891; R. L. Gibson, D., 1895.

MAINE.—Eugene Hale, R., 1893; William F. Frye, R., 1895.

MARYLAND.—A. P. Gorman, D., 1893; E. K. Wilson, D., 1897.

MASSACHUSETTS.—Henry L. Dawes, R., 1893; George F. Hoar, R., 1895.

MICHIGAN.—F. B. Stockbridge, R., 1893; James McMillan, R., 1895.

MINNESOTA.—C. K. Davis, R., 1893; W. D. Washburn, R., 1895.

MISSISSIPPI.—James Z. George, D., 1893; E. C. Walthall, D., 1895.

MISSOURI.—George G. Vest, D., 1891; F. M. Cockrell, D., 1895.

MONTANA.—W. F. Sanders, R., 1893; Thos. C. Power, R., 1895.

NEBRASKA.—A. S. Paddock, R., 1893; Charles F. Manderson, R., 1895.

NEVADA.—John P. Jones, R., 1891; W. M. Stewart, R., 1893.

NEW HAMPSHIRE.—Henry W. Blair, R., 1891; Wm. E. Chandler, R., 1895.

NEW JERSEY.—Rufus Blodgett, D., 1893; John R. McPherson, D., 1895.

NEW YORK.—Wm. M. Evarts, R., 1891; Frank Hiscok, R., 1893.

NORTH CAROLINA.—Zebulon B. Vance, D., 1891; M. W. Ransom, D., 1895.

NORTH DAKOTA.—Gilbert A. Pierce, R., 1891; Lyman R. Casey, R., 1893.

OHIO.—Henry B. Payne, D., 1891; John Sherman, R., 1893.

OREGON.—John H. Mitchell, R., 1891; Joseph N. Dolph, R., 1895.

PENNSYLVANIA.—J. Donald Cameron, R., 1891; M. S. Quay, R., 1893.

RHODE ISLAND.—Nelson W. Aldrich, R., 1893; N. F. Dixon, R., 1895.

SOUTH CAROLINA.—Wade Hampton, D., 1891; M. C. Butler, D., 1895.

SOUTH DAKOTA.—G. C. Moody, R., 1891; R. F. Pettigrew, R., 1893.

TENNESSEE.—Wm. B. Bate, D., 1893; Isham G. Harris, D., 1895.

TEXAS.—John H. Reagan, D., 1893; Richard Coke, D., 1895.

VERMONT.—Geo. F. Edmunds, R., 1893; Justin S. Mortill, R., 1897.

VIRGINIA.—John W. Daniel, D., 1893; John S. Barber, D., 1895.

WASHINGTON.—Watson C. Squire, R., 1891; John B. Allen, R., 1893.

WEST VIRGINIA.—Charles J. Faulker, D., 1893; John E. Kenna, D., 1895.

WISCONSIN.—John C. Spooner, R., 1891; Philletus Sawyer, R., 1893.

WYOMING.—Francis E. Warren, R.; Joseph M. Carey, R.

Dem., 37; Rep., 51; Rep. majority, 14.

HOUSE OF REPRESENTATIVES.

[Salary of members, \$5000 and mileage; of Speaker, \$8000.]

Speaker—THOMAS B. REED, of Maine.

Clerk—EDW. MCPHERSON, of Pennsylvania.

Sergeant-at-Arms—A. J. HOLMES, of Iowa.

Chaplain—Rev. WM. H. MILBURN, D. D.

Doorkeeper—CHAS. W. ADAMS, of Maryland.

Postmaster—J. A. WHEAT, of Wisconsin.

FIFTY-FIRST CONGRESS. FIFTY-SECOND CONGRESS.

Alabama.

Richard H. Clarke, D.

Hilary A. Herbert, D.

William C. Oates, D.

J. V. McDuffie, R.

James E. Cobb, D.

John H. Bankhead, D.

William H. Forney, D.

Joseph Wheeler, D.

Arkansas.

L. P. Featherston, R.

C. R. Breckinridge, D.

Thomas C. McRae, D.

John H. Rogers, D.

Samuel W. Peel, D.

California.

Vacancy.

Marion Biggs, D.

Joseph McKenna, R.

W. W. Morrow, R.

Thos. J. Clunie, D.

Wm. Vandever, R.

Colorado.

Hosea Townsend, R.

Connecticut.

Wm. E. Simonds, R.

W. F. Willcox, D.

Chas. A. Russell, R.

Frederick Miles, R.

Delaware.

J. B. Pennington, D.

Florida.

R. H. M. Davidson, D.

Robert Bullock, D.

Georgia.

Rufus E. Lester, D.

Henry G. Turner, D.

Charles F. Crisp, D.

Thos. W. Grimes, D.

John D. Stewart, D.

James H. Blount, D.

Judson C. Clements, D.

Henry H. Carlton, D.

Allen D. Candler, D.

Geo. T. Barnes, D.

Idaho.

Abner Taylor, R.

Frank Lawler, D.

Wm. E. Mason, R.

Alabama.

Richard H. Clarke, D.

H. A. Herbert, D.

William C. Oates, D.

Louis W. Turpin, D.

James E. Cobb, D.

J. H. Bankhead, D.

Wm. H. Forney, D.

Joseph Wheeler, D.

Arkansas.

William H. Cate, D.

C. R. Breckinridge, D.

Thomas C. McRae, D.

William L. Terry, D.

Samuel W. Peel, D.

California.

T. J. Geary, D.

A. Caminetta, D.

Joseph McKenna, R.

John T. Cutting, R.

E. J. Loud, R.

Wm. W. Bowers, R.

Colorado.

Hosea Townsend, R.

Connecticut.

Lewis Sperry, D.

W. F. Willcox, D.

Charles A. Russell, R.

R. E. DeForest, D.

Delaware.

John W. Causey, D.

Florida.

S. R. Mallory, D.

Robert Bullock, D.

Georgia.

Rufus E. Lester, D.

Henry G. Turner, D.

Charles F. Crisp, D.

Charles L. Moses, D.

L. F. Livingston, D.

James H. Blount, D.

R. W. Everett, D.

Thomas G. Lawson, D.

Thomas E. Winn, D.

Thomas E. Watson, D.

Idaho.

Willis Sweet, R.

Illinois.

W. G. Ewing, D.

L. E. McGann, R.

A. E. Durborrow, D.

George E. Adams, R.
Albert J. Hopkins, R.
Robt. R. Hitt, R.
T. J. Henderson, R.
Chas. A. Hill, R.
Lewis E. Payson, R.
P. S. Post, R.
Wm. H. Gest, R.
Scott Wike, D.
Wm. M. Springer, D.
J. H. Rowell, R.
Joseph G. Cannon, R.
Geo. W. Fithian, D.
Edward Lane, D.
Wm. S. Forman, D.
James R. Williams, D.
Geo. W. Smith, R.

Indiana.

Wm. F. Parrett, D.
John H. O'Neill, D.
Jason B. Brown, D.
Wm. S. Holman, D.
Geo. W. Cooper, D.
Thos. M. Browne, R.
Wm. D. Bynum, D.
E. V. Brookshire, R.
Joseph B. Cheadle, R.
Wm. D. Owen, R.
A. N. Martin, D.
C. A. O. McClellan, D.
Benj. F. Shively, D.

Iowa.

John H. Gear, R.
Walter I. Hayes, D.
D. B. Henderson, R.
J. H. Sweeney, R.
Daniel Kerr, R.
John F. Lacey, R.
Vacancy.
James P. Flick, R.
Joseph R. Reed, R.
Jonathan P. Dolliver, R.
Isaac S. Struble, R.

Kansas.

Edmund N. Morrill, D.
Edward H. Funston, R.
Bishop W. Perkins, R.
Harrison Kelley, R.
John A. Henderson, R.
Erastus J. Turner, R.
Samuel R. Peters, R.

Kentucky.

Wm. J. Stone, D.
Wm. T. Ellis, D.
I. H. Goodnight, D.
A. B. Montgomery, D.
Asher G. Caruth, D.
W. W. Dickerson, D.
W. C. P. Breckinridge, D.

Jas. B. McCreary, D.
Thos. N. Paynter, D.
John H. Wilson, R.
H. Frank Finley, R.

Louisiana.

Theo. S. Wilkinson, D.
H. Dudley Coleman, R.
Andrew Price, D.
N. C. Blanchard, D.
Charles J. Boatner, D.
S. M. Robertson, D.

Maine.

Thos. B. Reed, R.
Nelson Dingley, jr., R.
Seth L. Milliken, R.
Chas. A. Boutelle, R.

Maryland.

Chas. H. Gibson, D.
Herman Stump, D.
Harry W. Rusk, D.
H. Stockbridge, jr., R.

W. C. Newberry, D.
Albert J. Hopkins, R.
Robert R. Hitt, R.
T. J. Henderson, R.
Lewis Stewart, D.
H. W. Snow, D.
Philip S. Post, R.
Benjamin T. Cable, D.
Scott Wike, D.
Wm. M. Springer, D.
Owen Scott, D.
S. T. Busey, D.
George W. Fithian, D.
Edward Lane, D.
W. S. Forman, D.
J. R. Williams, D.
George W. Smith, R.

Indiana.

William F. Parrett, D.
John L. Bretz, D.
Jason B. Brown, D.
Wm. S. Holman, D.
George W. Cooper, D.
H. U. Johnson, R.
Wm. D. Bynum, D.
E. V. Brookshire, D.
Daniel Waugh, R.
D. A. Patton, D.
A. N. Martin, D.
C. A. O. McClellan, D.
Benj. F. Shively, D.

Iowa.

John J. Seerley, D.
Walter I. Hayes, D.
D. B. Henderson, R.
Walter H. Butler, D.
J. T. Hamilton, D.
F. E. White, D.
J. A. T. Hull, R.
James P. Flick, R.
Thomas Bowman, D.
R. J. P. Dolliver, R.
George D. Perkins, R.

Kansas.

Case Proderick, R.
E. H. Funston, R.
B. H. Clover, D.
John G. Otis, D.
John M. Davis, D.
William Baker, D.
J. A. Simpson, D.

Kentucky.

William J. Stone, D.
William T. Ellis, D.
I. H. Goodnight, D.
A. B. Montgomery, D.
Asher G. Caruth, D.
W. W. Dickerson, D.
W. C. P. Breckinridge, D.

James B. McCreary, D.
Thomas N. Paynter, D.
J. W. Kendall, D.
John H. Wilson, R.

Louisiana.

Adolph Meyer, D.
M. D. Lagan, D.
Andrew Price, D.
N. C. Blanchard, D.
Charles J. Boatner, D.
S. M. Robertson, D.

Maine.

Thomas B. Reed, R.
Nelson Dingley, jr., R.
S. L. Milliken, R.
C. A. Boutelle, R.

Maryland.

Henry Page, D.
Herman Stump, D.
H. W. Rusk, D.
Isidor Rayner, D.

S. E. Mudd, D.
Louis E. McComas, R.

Massachusetts.

Chas. S. Randall, R.
Elijah A. Morse, R.
John F. Andrew, D.
Joseph H. O'Neill, D.
Nathaniel P. Banks, R.
Harry Cabot Lodge, R.
Wm. Cogswell, R.
Fred T. Greenhalge, R.
John W. Candler, R.
Joseph H. Walker, R.
Rodney Wallace, R.
F. W. Rockwell, R.

Michigan.

John L. Chipman, D.
Edward P. Allen, R.
James O'Donnell, R.
Julius C. Burrows, R.
C. E. Belknap, R.
Mark S. Brewer, R.
J. R. Whiting, D.
A. T. Bliss, R.
B. M. Cutcheon, R.
F. W. Wheeler, R.
S. M. Stephenson, R.

Minnesota.

Mark H. Dunnell, R.
John Lind, R.
Darius S. Hall, R.
S. P. Snider, R.
Sol. G. Comstock, R.

Mississippi.

John M. Allen, D.
Jas. B. Morgan, D.
Thos. C. Catchings, D.
Clarke Lewis, D.
C. L. Anderson, D.
Thos. R. Stockdale, D.
Chas. E. Hooker, D.

Missouri.

Wm. H. Hatch, D.
Chas. H. Mansur, D.
Alex. M. Dockery, D.
R. P. C. Wilson, D.
John C. Tarsney, D.
John T. Heard, D.
R. H. Norton, D.
F. G. Niedringhaus, R.
N. Frank, R.
W. M. Kinsey, R.
Richard F. Bland, D.
Wm. J. Stone, D.
Wm. H. Wade, R.
R. H. Whitelaw, D.

Montana.

Thos. H. Carter, R.

Nebraska.

W. J. Cornell, R.
Gilbert L. Laws, R.
Geo. W. E. Dorsey, R.

Nevada.

Horace F. Bartine, R.

New Hampshire.

Alonzo Nute, R.
Orren C. Moore, R.

New Jersey.

Chris. A. Berger, R.
James Buchanan, R.
S. A. Geissenhainer, D.
Samuel Fowler, D.
Chas. D. Beckwith, R.
Herman Lehibach, R.
Wm. McAdoo, D.

New York.

James W. Covert, D.
Felix Campbell, D.
Wm. C. Wallace, R.

Barnes Compton, D.
William McKaig, D.

Massachusetts.

Charles S. Randall, R.
Elijah A. Morse, R.
John F. Andrew, D.
Joseph H. O'Neill, D.
Sherman Hoar, D.
H. C. Lodge, R.
William Cogswell, R.
R. M. Stevens, D.
George F. Williams, D.
Joseph H. Walker, R.
F. S. Coolidge, D.
John C. Crosby, D.

Michigan.

John L. Chipman, D.
James S. Gorman, D.
James O'Donnell, R.
Julius C. Burrows, D.
M. H. Ford, D.
Byron G. Stout, D.
J. R. Whiting, D.
H. M. Youmans, D.
H. H. Wheeler, D.
T. A. E. Wadock, D.
S. M. Stephenson, R.

Minnesota.

Wm. H. Harries, D.
John Lud, R.
Oliver N. Hall, D.
James N. Castle, D.
S. G. Comstock, R.

Mississippi.

John M. Allen, D.
John C. Kyle, D.
T. C. Catchings, D.
Clarke Lewis, D.
J. H. Beeman, D.
T. R. Stockdale, D.
Charles E. Hooker, D.

Missouri.

Wm. H. Hatch, D.
Charles H. Mansur, D.
Alex. M. Dockery, D.
R. P. C. Wilson, D.
John C. Tarsney, D.
John T. Heard, D.
R. H. Norton, D.
John J. O'Neill, D.
Seth W. Cobb, D.
Samuel Byrnes, D.
Richard F. Bland, D.
D. A. D'Arnaud, D.
R. A. Fyan, D.
Marshall Arnold, D.

Montana.

Wm. Wirt Dixon, D.

Nebraska.

Wm. J. Bryan, D.
Wm. A. McKeighan, D.
W. Thompson, D.

Nevada.

H. F. Bartine, R.

New Hampshire.

L. F. McKinney, D.
W. F. Daniell, D.

New Jersey.

C. A. Bergen, R.
James Buchanan, R.
S. A. Geissenhainer, D.
Samuel Fowler, D.
C. A. Cadmus, D.
Thomas D. English, D.
E. F. McDonald, D.

New York.

James W. Covert, D.
David A. Boddy, D.
W. J. Coombs, D.

John M. Clancy, D.
Thomas F. Magner, D.
C. H. Turner, D.
E. J. Dunphy, D.
J. H. McCarthy, D.
Amos J. Cummings, D.
F. B. Spinola, D.
John Quinn, D.
R. swell P. Flower, D.
Ashbell P. Fitch, D.
W. G. Stahlnecker, D.
Moses D. Stivers, R.
John H. Ketcham, R.
Charles F. Knapp, R.
J. A. Quackenbush, R.
Charles Tracey, D.
John Stanford, R.
John H. Moffit, R.
Frederick Lansing, R.
James S. Sherman, R.
Vacancy.
James J. Belden, R.
Milton DeLano, R.
Serenio E. Payne, R.
Thomas S. Flood, R.
John Raines, R.
Charles S. Baker, R.
John G. Sawyer, R.
John M. Farquhar, R.
John M. Wiley, D.
Wm. G. Laidlaw, R.

North Carolina.

Thos. G. Skinner, D.
H. P. Cheatham, R.
C. W. McClainmy, D.
B. H. Bunn, D.
John H. Brower, R.
Alfred Rowland, D.
John S. Henderson, D.
Wm. H. H. Cowles, D.
H. G. Ewart, R.

North Dakota.

H. C. Hansbrough, R.

Ohio.

Benj. Butterworth, R.
John H. Caldwell, R.
Elihu S. Williams, R.
Amuel S. Yoder, D.
George E. Seney, D.
M. M. Boothman, R.
Henry L. Morey, R.
Robert P. Kennedy, R.
Wm. C. Cooper, R.
Wm. E. Haynes, D.
A. C. Thompson, R.
Jacob J. Pugsley, R.
Jos. H. Outhwaite, D.
Chas. P. Wickham, R.
Chas. H. Grosvenor, R.
James W. Owens, D.
Joseph D. Taylor, R.
Wm. McKinley, jr., R.
Ezra B. Taylor, R.
Martin L. Smyser, R.
Theo. E. Burton, R.

Oregon.

Binger Hermann, R.

Pennsylvania.

Henry H. Bingham, R.
Charles O'Neil, R.
Richard Vaux, D.
John E. Rayburn, R.
Alfred C. Harmer, R.
S. Darlington, R.
R. M. Yardley, R.
Wm. Mutchler, D.
D. B. Brunner, D.
Marriott Brosius, R.
Jos. A. Scranton, R.
E. S. Osborne, R.
James B. Reilly, D.

John M. Clancy, D.
Thomas J. Magner, D.
John R. Fellows, D.
Edw. J. Dunphy, D.
T. J. Campbell, D.
A. J. Cummings, D.
F. B. Spinola, D.
J. DeW. Warner, D.
R. P. Flower, D.
Ashbel P. Fitch, D.
W. G. Stahlnecker, D.
Henry Bacon, D.
John H. Ketcham, R.
Isaac N. Cox, D.
J. A. Quackenbush, R.
Charles Tracey, D.
John Sanford, R.
John M. Wever, R.
Leslie W. Russell, R.
H. W. Bentley, D.
George Van Horn, D.
James J. Belden, R.
George W. Ray, R.
Serenio E. Payne, R.
H. H. Rockwell, D.
John Raines, R.
H. S. Greenleaf, D.
J. W. Wadsworth, R.
D. N. Lockwood, D.
Thomas L. Bunting, D.
W. B. Hooker, R.

North Carolina.

W. A. B. Branch, D.
H. P. Cheatham, R.
B. F. Grady, D.
Benj. H. Bunn, D.
A. J. A. Williams, D.
S. B. Alexander, D.
J. S. Henderson, D.
W. H. H. Cowles, D.
W. T. Crawford, D.

North Dakota.

M. N. Johnson, R.

Ohio.

Bellamy Storer, R.
J. A. Caldwell, R.
George W. Houk, D.
Martin K. Gantz, D.
Frederick C. Layton, D.
D. D. Donovan, D.
W. E. Haynes, D.
D. D. Hare, D.
J. H. Outhwaite, D.
Robert E. Doan, R.
J. M. Pattison, D.
Wm. H. Enochs, R.
Irvine Dungan, D.
James W. Owens, D.
M. D. Harter, D.
John G. Warwick, D.
Alfred J. Pearson, D.
Joseph D. Taylor, R.
Ezra B. Taylor, R.
Vincent A. Taylor, R.
Tom L. Johnson, D.

Oregon.

Binger Hermann, R.

Pennsylvania.

H. H. Bingham, R.
Charles O'Neil, R.
Wm. McAleer, R.
John E. Rayburn, R.
A. C. Harmer, R.
J. B. Robinson, R.
Edwin Hallowell, D.
Wm. Mutchler, D.
D. B. Brunner, D.
Marriott Brosius, R.
L. Ammerman, R.
George W. Shonk, R.
James B. Reilly, D.

John W. Rife, R.
Myron B. Wright, R.
H. C. McCormick, R.
Chas. R. Buckalew, D.
Lewis E. Atkinson, R.
Levi Maish, D.
Edward Scull, R.
S. A. Craig, R.
John Dalzell, R.
Thomas M. Bayne, R.
Jos. Warren Ray, R.
Chas. E. Townsend, R.
W. C. Culbertson, R.
C. W. Stone, R.
James Kerr, D.

Rhode Island.

Henry J. Spooner, R.
Warren O. Arnold, R.

South Carolina.

Samuel Dibble, D.
George D. Tillman, D.
James S. Cothran, D.
Wm. H. Perry, D.
John J. Hemphill, D.
George W. Dargan, D.
T. E. Miller, R.

South Dakota.

O. S. Gifford, R.
John A. Pickler, R.

Tennessee.

Alfred A. Taylor, R.
L. C. Houk, R.
H. Clay Evans, R.
Benton McMillan, D.
J. D. Richardson, D.
Jos. E. Washington, D.
W. C. Whitthorne, D.
Benj. A. Enloe, D.
Rice A. Pierce, D.
James I'heal, D.

Texas.

Charles Stewart, D.
Wm. H. Martin, D.
C. B. Kilgore, D.
D. B. Culberson, D.
Silas Hare, D.
J. Abbott, D.
Wm. H. Crain, D.
L. W. Moore, D.
Roger Q. Mills, D.
Joseph D. Sayres, D.
S. W. T. Lanham, D.

Vermont.

John W. Stewart, R.
Wm. W. Grout, R.

Virginia.

Thos. H. B. Browne, R.
George K. Bowden, R.
E. Waddell, Jr., D.
J. M. Langston, D.
P. G. Lester, D.
H. St. G. Tucker, D.
Chas. T. O'Ferrall, D.
Wm. H. F. Lee, D.
J. A. Buchanan, D.
Paul C. Edmunds, D.

Washington.

John L. Wilson, R.

West Virginia.

G. W. Atkinson, R.
Wm. L. Wilson, D.
J. D. Alderson, R.
B. Smith, R.

Wisconsin.

Lucien B. Caswell, R.
G. W. VanSchaick, R.
George H. Brickner, D.
Charles B. Clark, R.
Charles Barwig, R.
R. M. La Follette, R.

John W. Rife, R.
Myron B. Wright, R.
A. C. Hopkins, R.
S. P. Wolverton, D.
L. E. Atkinson, R.
F. E. Beltzhoover, D.
Edward Scull, R.
George F. Huff, R.
John Dalzell, R.
William A. Stone, R.
A. J. Stewart, R.
E. P. Gillespie, D.
Matthew Griswold, R.
Charles W. Stone, R.
George F. Kribbs, D.

Rhode Island.

Oscar Lapham, D.
(No Election.)

South Carolina.

W. H. Bramley, D.
George D. Tillman, D.
George Johnstone, D.
G. W. Shell, D.
John J. Hemphill, D.
E. T. Stackhouse, D.
William Elliott, D.

South Dakota.

John R. Gamble, R.
John A. Pickler, R.

Tennessee.

Alfred A. Taylor, R.
L. C. Houk, R.
H. C. Snodgrass, D.
Benton McMillan, D.
J. D. Richardson, D.
J. E. Washington, D.
N. N. Cox, D.
Benj. A. Enloe, D.
Rice A. Pierce, D.
Josiah Patterson, R.

Texas.

Charles Stewart, D.
John B. Long, D.
C. B. Kilgore, D.
D. B. Culberson, D.
Joseph W. Bailey, D.
Jo Abbott, D.
William H. Crain, D.
L. W. Moore, D.
Roger Q. Mills, D.
J. D. Sayres, D.
S. W. T. Lanham, D.

Vermont.

H. Henry Powers, R.
W. W. Grout, R.

Virginia.

William A. Jones, D.
J. W. Lawson, D.
George D. Wise, D.
James F. Epes, D.
Posey G. Lester, D.
Paul C. Edmunds, D.
C. T. O'Ferrall, D.
W. H. F. Lee, D.
J. A. Buchanan, D.
H. St. G. Tucker, D.

Washington.

John L. Wilson, R.

West Virginia.

J. O. Pendleton, D.
Wm. L. Wilson, D.
J. D. Alderson, D.
Jas. A. Capehart, D.

Wisconsin.

C. A. Babbitt, D.
Charles Barwig, D.
A. R. Bushnell, D.
John L. Mitchell, D.
George H. Brickner, D.
L. M. Miller, D.

Ormsby B. Thomas, R. Frank Coburn, D.
Nils P. Haugen, R. Nils P. Haugen, R.
Myron H. McCord, R. Thomas Lynch, D.

Wyoming.

Republicans, 170; Democrats, 160; Republican majority, 10.

TERRITORIAL DELEGATES.*Arizona.*

Marcus A. Smith, D.

Idaho.

Fred. T. Dubois, R.

New Mexico.

Antonio Joseph, D.

Utah.

John T. Caine, D.

Wyoming.

Joseph M. Carey, R.

U. S. MINISTERS ABROAD.*Countries.**Name.**App.*

Argentina Republic.....	J. R. G. Pitkin.....	1889
Austria-Hungary.....	Fred D. Grant.....	1889
Belgium.....	E. H. Terrill.....	1889
Bolivia.....	T. H. Anderson.....	1889
Brazil.....	Robt. Adams, jr.....	1890
Central America.....	Edwin H. Conger.....	1890
Chili.....	Patrick Egan.....	1889
China.....	Chas. Denby.....	1885
Colombia.....	John T. Abbott.....	1889
Corea.....	Hugh N. Dinsmore.....	1886
Denmark.....	Clark E. Carr.....	1889
France.....	Whitelaw Reid.....	1889
Germany.....	W. W. Phelps.....	1889
Great Britain.....	Robt. T. Lincoln.....	1889
Greece.....		
Roumania.....	A. L. Snowden.....	1889
Servia.....		
Hawaiian Islands.....	J. L. Stephens.....	1889
Hayti.....	Fred Douglass.....	1889
Italy.....	A. G. Porter.....	1889
Japan.....	J. F. Swift.....	1889
Liberia.....	E. E. Smith.....	1888
Mexico.....	Thomas Ryan.....	1889
Netherlands.....	S. R. Thayer.....	1889
Persia.....	E. Spencer Pratt.....	1886
Peru.....	John Hicks.....	1889
Portugal.....	Geo. S. Batcheller.....	1890
Russia.....	Chas. E. Smith.....	1890
Siam.....	S. H. Boyd.....	1890
Spain.....	E. Burd Grubb.....	1890
Sweden and Norway.....	W. W. Thomas, jr.....	1889
Switzerland.....	J. D. Washburn.....	1889
Turkey.....	Sol. Hirsch.....	1889
Uruguay and Paraguay.....	Geo. Maney.....	1889
Venezuela.....	W. L. Scruggs.....	1889

The ministers to Austria, Brazil, Central America, Chili, China, Colombia, France, Germany, Great Britain, Italy, Japan, Mexico, Peru, Russia, Spain, and Turkey, rank as Envoys Extraordinary and Ministers Plenipotentiary; the others are Ministers Resident. Those to Great Britain, France, Germany, and Russia, receive \$17,500 a year; to Austria, Brazil, China, Italy, Japan, Mexico, and Spain, \$12,000; to Central America, Chili, Peru, and Turkey, \$10,000; Colombia, Argentine Republic, Belgium, Hawaiian Islands, and the Netherlands, \$7500; Sweden and Norway, \$7400; Greece, etc., \$6500; Venezuela, \$6000; and Bolivia, Corea, Hayti, Liberia, Persia, Switzerland, Denmark, Paraguay, Portugal, and Siam, \$5000.

THE CENSUS.

Corrected up to December 28, 1890.

	1890.	1880.
The United States.....	62,622,250	50,155,783

NORTH ATLANTIC DIVISION.

Maine.....	661,086	648,936
New Hampshire.....	376,530	346,991
Vermont.....	332,422	332,296
Massachusetts.....	2,238,943	1,788,051
Rhode Island.....	345,506	276,535
Connecticut.....	746,258	622,700
New York.....	5,997,853	5,062,871
New Jersey.....	1,444,938	1,131,116
Pennsylvania.....	5,258,014	4,232,891

Totals.....	17,401,545	14,507,407
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SOUTH ATLANTIC DIVISION.

Delaware.....	168,493	146,608
Maryland.....	1,042,390	934,943
District of Columbia.....	230,392	177,624
Virginia.....	1,655,980	1,512,585
West Virginia.....	762,794	618,457
North Carolina.....	1,617,947	1,399,750
South Carolina.....	1,151,149	995,577
Georgia.....	1,837,353	1,542,190
Florida.....	391,422	269,493

Totals.....	8,857,920	7,597,197
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NORTHERN CENTRAL DIVISION.

Ohio.....	3,672,316	3,198,082
Indiana.....	2,192,404	2,197,301
Illinois.....	8,886,351	8,077,871
Michigan.....	2,093,889	1,686,937
Wisconsin.....	1,686,860	1,315,497
Minnesota.....	1,301,826	780,773
Iowa.....	1,911,896	1,694,615
Missouri.....	2,679,184	2,168,880
North Dakota.....	182,719	96,909
South Dakota.....	328,808	98,268
Nebraska.....	1,058,910	452,402
Kansas.....	1,427,096	996,096

Totals.....	22,362,279	17,364,111
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SOUTHERN CENTRAL DIVISION.

Kentucky.....	1,858,635	1,648,690
Tennessee.....	1,767,518	1,542,369
Alabama.....	1,518,017	1,262,505
Mississippi.....	1,289,600	1,131,597
Louisiana.....	1,118,587	999,946
Texas.....	2,235,523	1,591,749
Oklahoma.....	61,834	
Arkansas.....	1,138,179	802,525

Totals.....	10,972,893	8,919,371
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WESTERN DIVISION.

Montana.....	132,159	39,159
Wyoming.....	60,705	20,739
Colorado.....	412,198	194,327
New Mexico.....	153,593	119,565
Arizona.....	59,620	40,440
Utah.....	207,905	143,963
Nevada.....	45,761	62,266
Idaho.....	84,485	32,610
Washington.....	349,390	75,116
Oregon.....	313,767	174,788
California.....	1,208,130	864,694

Totals.....	8,027,613	1,767,697
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This does not include Alaska, which had 30,173 people in 1880; the Indian Territory, whose population is given in the late report of the Indian Agent (1890) as 206,500; and Indians on reservations—those not taxed are by law not included in the census, and in 1890 were estimated at 245,000. Making reasonable additions upon the basis of these to the figures above, and we have a total population slightly

exceeding 63,000,000. Numerous reports of defective enumeration, in some cases proved true by recounts, probably justify the estimate of 1,000,000 more as uncounted; so that it is fairly safe to speak of the population of the United States in round numbers as 64,000,000. The total population in 1880 was estimated by Spofford at 50,500,000.

The percentages of increase from 1880 to 1890 are: For Alabama, 19.84; Arizona, 47.43; Arkansas, 40.58; California, 39.72; Colorado, 112.12; Connecticut, 19.84; Delaware, 14.93; District of Columbia, 29.71; Florida, 45.24; Georgia, 19.14; Idaho, 158.77; Illinois, 24.32; Indiana, 10.82; Iowa, 17.68; Kansas, 43.27; Kentucky, 12.73; Louisiana, 19.01; Maine, 1.87; Maryland, 11.49; Massachusetts, 25.57; Michigan, 27.92; Minnesota, 60.74; Mississippi, 13.96; Missouri, 23.56; Montana, 237.49; Nebraska, 134.06; Nevada, 26.51 (decrease); New Hampshire, 8.51; New Jersey, 37.74; New Mexico, 23.46; New York, 18.00; North Carolina, 15.59; North Dakota, 395.05; Ohio, 14.83; Oregon, 79.53; Pennsylvania, 24.77; Rhode Island, 24.94; South Carolina, 15.63; South Dakota, 234.60; Tennessee, 14.60; Texas, 40.44; Utah, 44.42; Vermont, .04; Virginia, 9.48; Washington, 365.13; West Virginia, 23.94; Wisconsin, 28.23; Wyoming, 192.01.

The following table shows the relative rank in population of the States and Territories in 1890 and in 1880:

1890.	1880.
1. New York.	New York,
2. Pennsylvania,	Pennsylvania,
3. Illinois,	Ohio,
4. Ohio,	Illinois,
5. Missouri,	Missouri,
6. Massachusetts,	Indiana,
7. Texas,	Massachusetts,
8. Indiana,	Kentucky,
9. Michigan,	Michigan,
10. Iowa,	Iowa,
11. Kentucky,	Texas,
12. Georgia,	Tennessee,
13. Tennessee,	Georgia,
14. Wisconsin,	Virginia,
15. Virginia,	North Carolina,
16. North Carolina,	Wisconsin,
17. Alabama,	Alabama,
18. New Jersey,	Mississippi,
19. Kansas,	New Jersey,
20. Minnesota,	Kansas,
21. Mississippi,	South Carolina,
22. California,	Louisiana,
23. South Carolina,	Maryland,
24. Arkansas,	California,
25. Louisiana,	Arkansas,
26. Nebraska,	Minnesota,
27. Maryland,	Maine,
28. West Virginia,	Connecticut,
29. Connecticut,	West Virginia,
30. Maine,	Nebraska,
31. Colorado,	New Hampshire,
32. Florida,	Vermont,
33. New Hampshire,	Rhode Island,
34. Washington,	Florida,
35. Rhode Island,	Colorado,
36. Vermont,	District of Columbia,
37. South Dakota,	Oregon,
38. Oregon,	Delaware,
39. Dist. of Columbia,	Utah,
40. Utah,	Dakota,
41. North Dakota,	New Mexico,
42. Delaware,	Washington,
43. New Mexico,	Nevada,
44. Montana,	Arizona,
45. Idaho,	Montana,
46. Oklahoma,	Idaho,
47. Wyoming,	Wyoming.
48. Arizona,	
49. Nevada.	

The following statement of populations makes an interesting comparison: Russian Empire, 113,354,649; United States, 62,622,250; Germany, 46,852,450; Austria-Hungary, 40,464,808; France, 38,218,903; Great Britain and Ireland, 35,246,633; Italy, 28,460,000; Spain, 17,550,246.

	Pop. 1880.	Pop. 1890.	Net Rank. Gain. '80 '90
Albany.....	90,758	93,523	2,765 21 29
Allegheny.....	78,682	104,907	26,225 28 28
Atlanta.....	37,409	65,514	28,105 48 42
Baltimore....	332,313	433,547	101,224 7 7
Boston.....	362,839	446,507	83,668 5 6
Brooklyn.....	568,663	804,377	237,714 3 4
Buffalo.....	155,134	254,457	99,323 13 11
Cambridge....	52,669	69,887	17,168 31 41
Camden.....	41,659	58,274	16,615 44 50
Chicago.....	503,185	1,098,576	595,391 4 2
Cincinnati....	255,139	296,309	41,170 8 9
Cleveland....	160,146	291,456	101,400 11 10
Columbus....	51,647	90,398	38,751 33 30
Dayton.....	38,678	58,868	20,190 47 48
Denver.....	33,629	106,670	71,041 49 27
Detroit.....	116,340	205,699	89,359 18 15
Fall River....	48,961	74,351	25,390 57 40
G'd Rapids....	32,016	64,147	32,131 58 44
Indianapolis..	75,056	107,445	32,389 24 26
Jersey City... 120,722	163,987	43,265 17 19	
Kansas City... 55,785	132,416	76,631 30 24	
Louisville.... 123,758	161,005	37,247 16 20	
Lowell..... 59,475	77,605	18,130 27 38	
Memphis.... 33,592	54,586	20,994 54 43	
Milwaukee.... 115,587	203,979	88,392 19 16	
Minneapolis.. 46,887	164,738	117,851 38 18	
Nashville.... 43,350	76,309	32,959 40 39	
Newark..... 136,508	182,020	45,512 15 17	
New Haven.... 62,832	85,891	23,009 26 32	
New Orleans.. 216,000	241,995	25,995 10 12	
New York.... 1,200,209	1,513,501	313,292 1 1	
Omaha..... 30,518	139,526	109,008 63 21	
Paterson..... 51,031	78,300	27,269 34 37	
Philadelphia.. 847,170	1,044,894	197,724 2 3	
Pittsburgh.... 156,389	238,473	82,084 12 13	
Providence... 104,857	132,043	27,186 20 25	
Reading..... 43,278	58,926	15,648 41 47	
Richmond.... 63,600	80,838	17,238 25 36	
Rochester.... 89,366	138,327	48,961 22 22	
St. Louis..... 350,518	490,357	109,839 6 5	
St. Paul..... 41,473	133,156	91,683 45 23	
San Francisco 233,959	297,990	63,931 9 8	
Scranton.... 45,850	83,450	37,600 39 34	
Syracuse..... 51,792	87,777	35,985 32 31	
Toledo..... 50,137	82,652	32,515 35 35	
Trenton..... 29,910	58,488	28,578 64 49	
Troy..... 56,747	60,605	3,858 20 46	
Washington... 147,233	228,169	80,967 14 14	
Worcester... 58,291	84,536	26,245 28 33	
Wilmington... 42,478	61,437	18,959 42 45	

7,750,715 11,312,049 3,563,138

The net gains in these cities during the last ten years amount to nearly 46 per cent of the entire population in 1880, and are about 90 per cent of the entire growth of the country in the decade. In 1880 there were twenty cities in the country with over 100,000 inhabitants each; by the census of 1890 there are twenty-eight. Those which have passed the century mark during the decade are Minneapolis, Omaha, Rochester, St. Paul, Kansas City, Denver, Indianapolis, and Allegheny.

The census bulletins also include valuable statements concerning the bonded and floating debt of the States. Of the North-Central and Western States, Ohio leads in amount of bonded debt in both 1880 and 1890, Missouri remains second, and Illinois comes third; Colorado exhibits the greatest percentage of increase in bonded debt; and Nevada, from the imperfect figures at hand, shows no bonded debt.

PRESIDENTIAL ELECTIONS—POPULAR AND ELECTORAL VOTE, 1868 AND 1884.

STATES.	1868.					1884.				
	Harrison, Rep.	Cleveland, Dem.	Fisk, Prohib.	Streeter, Labor.	Elect. Har. Cleve.	Blaine, Rep.	Cleveland, Dem.	Butler, People's.	St. John, Prohib.	Elect. Cleve. Blaine.
Alabama.....	57,197	117,310	583	.....	10	59,591	93,951	873	612	10
Arkansas.....	58,752	85,962	614	10,613	7	50,805	72,927	1,847	.....	7
California.....	124,809	117,729	5,761	.....	8	102,416	89,288	2,017	2,920	8
Colorado.....	51,796	37,610	2,210	112	3	36,290	27,723	1,958	761	3
Connecticut.....	74,584	74,920	4,234	.....	6	65,923	67,199	1,688	2,305	6
Delaware.....	12,973	16,414	400	.....	3	12,951	16,964	6	55	3
Florida.....	26,659	39,561	403	.....	4	28,031	31,766	.....	72	4
Georgia.....	40,443	100,472	1,802	136	12	48,603	94,667	145	195	12
Illinois.....	370,636	348,594	21,562	8,456	22	337,474	312,355	10,910	12,074	22
Indiana.....	263,361	261,013	9,881	2,694	15	238,463	244,900	8,293	3,028	15
Iowa.....	211,598	179,877	3,550	9,105	13	197,089	177,316	.....	1,473	13
Kansas.....	182,502	102,541	6,452	36,237	9	154,406	90,132	16,341	4,495	9
Kentucky.....	155,134	183,800	5,225	622	13	118,122	152,961	1,691	3,139	13
Louisiana.....	30,701	85,032	130	.....	8	46,347	62,540	.....	8	8
Maine.....	73,734	50,482	2,690	1,345	6	72,209	52,140	3,953	2,160	6
Maryland.....	99,986	106,168	4,766	.....	8	85,699	96,932	531	2,794	8
Massachusetts.....	183,447	151,000	8,641	.....	14	146,724	122,481	24,433	10,026	14
Michigan.....	236,370	213,404	20,942	4,542	13	192,669	149,835	42,243	18,403	13
Minnesota.....	136,359	99,664	15,000	.....	7	111,923	70,144	3,583	4,684	7
Mississippi.....	30,096	85,471	218	.....	22	43,509	76,510	.....	9	22
Missouri.....	236,253	261,954	4,540	18,589	16	202,929	235,988	.....	2,153	16
Nebraska.....	108,425	80,552	9,429	4,226	5	76,912	54,391	.....	2,890	5
Nevada.....	7,088	5,149	41	.....	3	7,193	5,578	26	.....	3
New Hampshire.....	45,728	43,358	1,592	13	4	43,249	39,183	552	1,571	4
New Jersey.....	144,344	151,493	7,904	.....	9	123,440	127,798	3,496	6,159	9
New York.....	660,338	635,963	30,231	626	36	562,005	563,154	16,984	25,016	36
North Carolina.....	134,784	147,902	.....	.....	11	125,068	142,952	.....	454	11
Ohio.....	416,054	396,455	24,356	3,496	23	400,082	368,280	5,179	11,069	23
Oregon.....	33,293	26,524	1,677	363	3	26,860	24,604	726	492	3
Pennsylvania.....	526,091	446,633	20,947	3,873	30	473,804	392,785	16,992	15,283	30
Rhode Island.....	21,960	17,533	1,281	.....	4	19,030	12,391	422	928	4
South Carolina.....	13,740	65,825	.....	.....	9	21,733	69,890	.....	9	9
Tennessee.....	139,989	158,787	5,969	.....	12	124,078	139,258	957	1,131	12
Texas.....	88,280	234,883	4,749	20,459	13	93,141	225,309	3,321	3,534	13
Vermont.....	45,192	16,788	1,450	.....	4	39,514	17,331	785	1,752	4
Virginia.....	150,438	151,977	1,678	.....	12	63,096	67,317	810	939	12
West Virginia.....	78,491	79,330	.....	.....	6	139,356	145,497	.....	138	6
Wisconsin.....	176,553	155,282	4,277	8,552	11	161,157	146,459	4,598	7,656	11
Total.....	5,339,009	5,334,034	245,705	141,902	233	4,851,981	4,874,986	175,370	150,360	219
Plurality.....	.....	95,025	.....	.....	.....	.....	23,005	.....	.....	.....

Total Electoral College, votes 1876-80.....369
Necessary to a choice.....185

Total Electoral College, 1884-88.....401
Necessary to a choice.....201

Hayes's majority, 1876, 1 vote; Garfield's majority, 1880, 59 votes; Cleveland's majority, 1884, 37; Harrison's majority, 1888, 65.

MICHIGAN.

The State Government, 1891.

EXECUTIVE—STATE OFFICERS.

Governor—Edwin B. Winans. Salary, \$4000.
Lieutenant-Governor—John Strong, jr. Paid legislative per diem during the session.
Secretary of State—Daniel E. Soper. \$800.
State Treasurer—Frederick Braastad. \$1000.
Auditor-General—George W. Stone. \$2000.
Commissioner of the Land Office—George T. Shaffer. \$800.
Attorney-General—Adolphus A. Ellis. \$800.
Superintendent of Public Instruction—Ferris S. Fitch. \$1000.

Regents of the University.—Arthur M. Clark, Lexington, term expires Dec. 31, 1891; Charles J. Willett, St. Louis, 1891; Charles R. Whitman, Ypsilanti, 1893; Dr. Herman Keifer, Detroit, 1893; Roger W. Butterfield, Grand Rapids, 1895; Charles Hebard, L'Anse, 1895; Charles S. Draper, East Saginaw, 1897; Wm. J. Cocker, Adrian, 1897.

State Board of Education.—Perry F. Powers, Cadillac, term expires Dec. 31, 1894; David A. Hammond, Charlotte, 1896; Samuel S. Babcock, Detroit, 1892; Secretary, *ex-officio*, Ferris S. Fitch, Pontiac.

JUDICIARY—SUPREME COURT.

Chief Justice—John W. Champlin, Grand Rapids, term expires Dec. 31, 1891.

Associate Justices.—Allen B. Morse, Ionia, term expires Dec. 31, 1893; John W. McGrath, Detroit, 1895; Charles D. Long, Flint, 1897; Claudius B. Grant, Houghton, 1899. Clerk, Chas. C. Hopkins, Lansing; Reporter, Wm. D. Fuller, Newaygo. The salary of each Justice of the Supreme Court is \$5000, and of the reporter \$1500. The Clerk receives fees. The court holds four terms annually in Lansing, commencing the first Tuesday after the first Monday in January, April, June, and October.

CIRCUIT JUDGES.

1. Victor H. Lane, Adrian.
2. Thomas O'Hara, Berrien Springs.
3. Geo. Gartner, Henry N. Brevoort, Cornelius J. Reilly, Geo. S. Hosmer, all of Detroit.
4. Erastus Peck, Jackson.
5. Frank A. Hooker, Charlotte.
6. Joseph B. Moore, Lapeer.
7. Wm. Newton, Flint.
8. Vernon H. Smith, Ionia.
9. George M. Buck, Kalamazoo.
10. } Chauncey H. Gage, Saginaw.
} John A. Edgett, East Saginaw.
11. Joseph H. Steere, Salt Ste. Marie.
12. William D. Williams, Marquette.
13. J. G. Ramsdell, Traverse City.
14. Albert Dickerman, Muskegon.
15. Noah P. Loveridge, Coldwater.
16. Arthur L. Canfield, Mt. Clemens.
17. } William E. Grove, Grand Rapids.
} Marsden C. Burch, Grand Rapids.
18. George P. Cobb, Bay City.
19. J. Byron Judkins, Hersey.
20. Daniel J. Arnold, Allegan.
21. Henry Hart, Midland City.
22. Edward D. Kinne, Ann Arbor.
23. William H. Simpson, Au Sable.
24. Watson Beach, Lexington.
25. John W. Stone.
26. Robert J. Kelley, Alpena.
27. John H. Palmer, Big Rapids.
28. Fred H. Aldrich, Cadillac.
29. Sherman B. Daholl, St. John.

LEGISLATURE OF 1891-92.

SENATE.

- 1st District—Frank Smith, D., Detroit.
 2d—Joseph M. Weiss, R., Detroit.
 3d—Peter E. Park, D., Detroit.
 4th—Augustin C. McCormick, D., Carleton.
 5th—George B. Horton, R., Fruit Ridge.
 6th—William H. Withington, R., Jackson.
 7th—Alfred Milnes, R., Coldwater.
 8th—Mardin Sabin, R., Centreville.
 9th—John S. Beers, D., Stevensville.
 10th—Jan W. Garvelink, R., Fillmore.
 11th—William Miller, D., Eaton Rapids.
 12th—Marcus Wilcox, D., Corunna.
 13th—John R. Benson, D., Mt. Morris.
 14th—Charles B. Boughner, D., Pontiac.
 15th—Martin Crocker, D., Mt. Clemens.
 16th—Robert L. Taylor, R., Lapeer.
 17th—John Bastone, D., Caro.
 18th—Chauncey W. Wisner, D., Saginaw, E. Side.
- 19th—William Toan, R., Portland.
 20th—Peter Doran, D., Grand Rapids.
 21st—George F. Porter, D., Conklin.
 22d—Enoch T. Muford, D., Hart.
 23d—Aaron B. Bugw, D., Sheridan.
 24th—Frank L. Prindle, R., Gladwin.
 25th—Peter Gilbert, D., Sterling.
 26th—Benjamin C. Morse, R., Alpena.
 27th—James E. Holcomb, D., Wolverine.
 28th—A. Oren Wheeler, R., Manistee.
 29th—Robert R. Wilkinson, R., Torch Lake.
 30th—George W. Sharp, D., Newberry.
 31st—Joseph Fleishiem, R., Menominee.
 32d—John H. D. Stevens, R., Ironwood.
- Democrats, 18; Republicans, 14. Democratic majority, 4.

HOUSE.

- Allegan*—Royal C. Eaton, R., Spring Grove;
 John Kolvoord, D., Hamilton.
Alpena, Montmorency, Otsego—Lemuel G. Dafeo, R., Alpena.
Barry—Casper L. Brown, D., Nashville.
Bay—Birdsey Knight, D., Bay City; John C. Rowden, D., Auburn.
Berrien—Hewlett C. Rockwell, D., Benton Harbor; George A. Lambert, D., Niles.
Branch—Darius D. Buell, R., Union City.

- Calhoun*—Marvin Ferguson, D., Marshall;
 Frank W. Clapp, R., Battle Creek.
Cass—Edward R. Spencer, R., Dowagiac.
Charlevoix, Antrim, Manitou—Reynolds Landon, D., Elk Rapids.
Cheboygan, Emmet, Presque Isle—Philip B. Wachtel, D., Petoskey.
Chippewa, Alger, Luce, Mackinaw, Schoolcraft—Michael J. Doyle, D., Sault Ste. Marie.
Clinton—Levi W. Baldwin, D., Fowler.
Delta, Iron—Alonzo R. Northrup, R., Escanaba.
Eaton—Samuel Miller, D., Eaton Rapids;
 Alden B. Smith, R., Kalamo.
Genesee—George E. Houghton, D., Swartz Creek; Marvin L. Seeley, D., Mt. Morris.
Grand Traverse, Kalkaska—Jacob N. Tinkebaugh, R., Kalkaska.
Gratiot—Hugh Chisholm, D., Breckenridge.
Hillsdale—Avery A. Smith, R., Hillsdale; F. Hart Smith, R., Somerset.
Houghton—William Harry, R., Hancock.
Huron—Luke S. Johnson, D., Caseville.
Ingham—Augustin F. Ferguson, D., Okemos,
 Charles C. Fitch, D., Mason.
Ionia—Frank E. Doremus, D., Portland; Willard Hawley, R., Saranac.
Iosco, Alcona, Arenac—George Orth, D., Au Sable.
Isabella—John W. Curtiss, D., Dushville.
Jackson—Thomas E. Barkworth, D., Jackson; John W. Watts, R., Jackson.
Kalamazoo—John J. Lusk, R., Kalamazoo,
 William A. Blake, D., Galesburg.
Kent—Arthur S. White, D., Grand Rapids;
 John W. Hayward, D., Grand Rapids; Edmund M. Barnard, R., Grand Rapids; Norton Fitch, R., Sparta.
Lapeer—Frederick G. Bullock, D., Lapeer;
 Willard Harwood, R., Goodland.
Leelanaw, Benzie—Dennison F. Holden, R., Oviatt.
Lenawee—John D. Shull, R., Tecumseh;
 Lewis C. Baker, D., Adrian; Selah H. Raymond, R., Manitou Beach.
Livingston—William Harper, D., Madison.
Macomb—Lucius H. Canfield, D., Richmond;
 Harvey Mellen, D., Romeo.
Manistee—Moses R. Denning, D., Manistee.
Marquette—George Wagner, R., Nagaunee;
 Eugene G. St. Clair, R., Ishpeming.
Mason—William Harley, D., Riverton.
Mecosta—Walker O. Smith, R., Crapo.
Menominee—John Perkins, R., Norway.
Midland, Clare, Gladwin—William D. Marsh, D., Midland.
Monroe—Samuel P. Jackson, D., Monroe;
 Charles D. Dodge, D., London.
Montcalm—George H. Lester, D., Crystal;
 Lucius L. Church, R., Howard City.
Muskegon—Francis W. Cook, D., Muskegon;
 Frank E. Thatcher, D., Muskegon.
Newaygo—David Collins, R., Croton.
Oakland—Arthur R. Tripp, D., Pontiac;
 William E. Carpenter, D., Pontiac.
Oceana—William F. Lewis, D., Shelby.
Ogemaw, Crawford, Oscoda, Roscommon—Devere Hall, R., West Branch.
Ontonagon, Baraga, Isle Royal, Keweenaw, Gogebic—Louis W. Munthe, D., Ironwood.
Osceola, Missaukee—Daniel McGovern, D., Tustin.
Ottawa—Gerritt J. Diekema, R., Holland;
 George F. Richardson, D., Hudsonville.
Saginaw—Edward L. Stone, R., Saginaw,
 W. Side; Hiram W. Robinson, D., Bridgeport;
 Rowland Connor, D., Saginaw, E. Side; James W. Graham, D., St. Charles.
Sanilac—Frank J. Ryland, R., Peck; Alonzo Downing, D., Downingtown.
Shiawassee—Hiram Johnson, D., Venice Center; Philip V. M. Botsford, D., Pittsburg.

St. Clair—Frederick H. Bathey, D., Smith's Creek; Joseph Gibbons, D., Blaine.
St. Joseph—George W. Osborn, D., Parkville.
Tuscola—James Kirk, R., Fair Grove; Travis Leach, D., Ellington.
Van Buren—Charles L. Eaton, R., Paw Paw; Milan Wiggins, R., Bloomingdale.
Washtenaw—John V. N. Gregory, D., Dexter; James L. Lowden, D., Ypsilanti.
Wayne—John Miner, D., Detroit; William B. Jackson, D., Detroit; Lawrence Nolan, D., Detroit; Francis Fildew, D., Detroit; William E. Henze, D., Detroit; Adolph N. Marion, D., Detroit; William M. Holton, D., Dearborn; W. Worth Wendell, D., Northville; James McCloy, D., Wyandotte.
Wexford, Lake—Sylvanus Alexander, R., Sherman.
 Democrats, 66; Republicans, 84; Dem. maj., 32. Dem. maj. on joint ballot, 36.

MILITARY DEPARTMENT.

[December 1, 1890.]

Gov. Cyrus G. Luce, Commander-in-Chief, Lansing.

Brig.-Gen. Daniel B. Ainger, Adjutant-General, Charlotte.

Lieut. Col. William W. Cook, Ass't Adjutant-General, Lansing.

Brig.-Gen. Frank D. Newberry, Inspector-General, and *ex-officio* Member State Military Board, Coldwater.

Maj. Edward F. Douglass, Ass't Inspector-General, Houghton.

Capt. Frank M. Williams, Ass't Inspector-General, Grand Rapids.

Brig.-Gen. George M. Devlin, Quartermaster-General, Jackson.

Lieut.-Col. La Fayette Harter, Ass't Q. M. General, Detroit.

Maj. Frank M. Drumm, Ass't Q. M. General, Jackson.

Col. E. William Cobb, Paymaster-General, Adrian.

Col. E. Crofton Fox, A. D. C., and President State Military Board, Grand Rapids.

Col. Fred E. Farnsworth, A. D. C., and Treasurer State Military Board, Detroit.

Col. James N. Cox, A. D. C., Calumet.

Col. Joseph W. Kerns, A. D. C., East Saginaw.

Col. Frank J. Haynes, A. D. C., Port Huron.

Maj. Milo D. Campbell, Military Secretary, Lansing.

Maj. Robert S. Pratt, Judge Advocate, Bay City.

FIRST BRIGADE.

Brig.-Gen. Eugene Robinson, Detroit.

Lieut.-Col. Chas. E. Locke, A. A. G., Detroit.

Lieut.-Col. Jul. Suckert, A. Q. M. G., Detroit.

Lieut.-Col. James B. Book, Surgeon, Detroit.

Lieut.-Col. August Goebel, A. I. G., Detroit.

Capt. Eugene W. Jones, A. D. C., Grand Rapids.

Capt. Philip H. Withington, A. D. C., Jackson.

FIRST REGIMENT—Field and Staff.

Col. Elmer W. Bowen, Ypsilanti.

Lieut.-Col. John E. Tyrrell, Jackson.

Maj. Sidney W. Millard, Ann Arbor.

Maj. Charles M. Woodward, Surgeon, Tecumseh.

Capt. John F. Denslow, Assistant Surgeon, Muskegon.

Capt. Elbridge W. White, Chaplain, Jackson.

First Lieut. John W. Barry, R. Q. M., Jackson.

First Lieut. Robert Darnton, Adjutant, Adrian.

SECOND REGIMENT—Field and Staff.

Col. Edwin M. Irish, Kalamazoo.

Lieut. Col. Wm. T. McGurrin, Grand Rapids.

Maj. Charles H. Rose, Grand Rapids.
 Maj. Wm. F. Hake, Surgeon, Grand Rapids.
 Capt. Irwin Simpson, Assistant Surgeon, Kalamazoo.

Capt. Abner L. Frazer, jr., Chaplain, Kalamazoo.

First Lieut. Wm. L. White, R. Q. M., Grand Rapids.

First Lieut. Wm. Shakespeare, jr., Adjutant, Kalamazoo.

THIRD REGIMENT—Field and Staff.

Col. Charles R. Hawley, Bay City.

Lieut.-Col. Frank B. Lyon, Calumet.

Maj. Cyrus C. Yawkey, East Saginaw.

Maj. Arthur Wilkinson, Surgeon, Alpena.

Capt. Henry M. Curtis, Chaplain, Flint.

Capt. Eugene W. Davis, Assistant Surgeon, Saginaw.

First Lieut. James A. McKay, Adjutant, Bay City.

First Lieut. Fred A. Aldrich, R. Q. M., Flint.

FOURTH REGIMENT—Field and Staff.

Col. Patrick J. Sheahan, Detroit.

Lieut.-Col. George W. Corns, Detroit.

Maj. Chas. E. Richmond, Detroit.

Maj. John E. Clark, Surgeon, Detroit.

Capt. W. F. H. Edwards, Assistant Surgeon, Detroit.

Capt. John Munday, Chaplain, Allegan.

First Lieut. Charles S. Baxter, Adjutant, Detroit.

VOTE FOR GOVERNOR.

COUNTIES.

	Winans, D.	Turner, R.	Partridge, P.	Belding, I.
Alcona.....	387	459	11	4
Alger.....	46	279	4	.....
Allegan.....	3135	3471	772	490
Alpena.....	1460	1254	81	5
Antrim.....	608	803	252	22
Arenac.....	386	247	19	330
Baraga.....	461	434	11	.....
Barry.....	2175	2359	517	78
Bay.....	5152	3216	191	232
Benzie.....	269	447	137	2
Berrien.....	4206	3929	572	196
Branch.....	1650	3612	964	1015
Calhoun.....	3554	3651	1069	113
Cass.....	2474	2513	390	7
Charlevoix.....	667	1025	128	60
Cheboygan.....	1274	958	68	11
Chippewa.....	865	943	5	6
Clare.....	749	604	137	17
Clinton.....	2620	2620	519	42
Crawford.....	350	285	6	.....
Delta.....	1454	1174	69	7
Eaton.....	2339	3395	608	1087
Emmet.....	902	825	94	10
Genesee.....	3654	3507	933	81
Gladwin.....	286	406	35	12
Gogebic.....	1036	1465	60	6
Grand Traverse.....	701	1217	306	116
Gratiot.....	2233	2747	557	219
Hillsdale.....	2671	3368	781	471
Houghton.....	2045	2496	183	27
Huron.....	1980	1391	171	538
Ingham.....	3874	3581	691	934
Ionia.....	3737	3712	439	10
Iosco.....	1417	1419	90	8
Iron.....	807	833	33	1
Isabella.....	1520	1553	243	315
Jackson.....	4503	3733	749	1067
Kalamazoo.....	3768	4250	556	198
Kalkaska.....	326	565	179	10
Kent.....	11833	9774	1604	83

VOTE FOR GOVERNOR.—CONTINUED.

COUNTIES.	Winans, D.	Turner, R.	Partridge, P.	Belding, I.
Keweenaw.....	79	290	22	9
Lake.....	585	586	99	2
Lapeer.....	2407	2429	554	18
Leelanaw.....	362	570	149	9
Lenawee.....	5267	4979	1306	50
Livingston.....	2370	1899	447	684
Luce.....	235	243	10	.....
Mackinac.....	776	322	33	8
Macomb.....	3026	2493	235	18
Manistee.....	1854	1615	266	5
Manitou.....	97	9	.....	.....
Marquette.....	1864	3017	580	14
Mason.....	1346	1165	184	17
Mecosta.....	1226	1520	361	232
Menominee.....	2057	2112	272	27
Midland.....	776	867	106	185
Missaukee.....	533	455	89	2
Monroe.....	3163	2251	384	8
Montcalm.....	2446	3032	515	41
Montmorency.....	217	249	10	2
Muskegon.....	3278	2937	578	14
Newaygo.....	1458	1713	339	160
Oakland.....	4784	4244	714	147
Oceana.....	1361	1125	664	9
Ogemaw.....	509	504	91	4
Ontonagon.....	538	363	9	.....
Oscoda.....	1006	968	466	16
Oscoda.....	252	327	8	4
Otsego.....	456	504	62	1
Ottawa.....	3109	2965	316	19
Presque Isle.....	400	332	12	4
Roscommon.....	286	189	10	.....
Saginaw.....	7395	5450	563	26
Sanilac.....	1897	2015	482	104
Schoolcraft.....	579	442	95	9
Shiawassee.....	2800	2723	762	361
St. Clair.....	4826	3922	379	9
St. Joseph.....	2387	2394	330	1126
Tuscola.....	1941	2477	412	1033
Van Buren.....	1962	2341	542	882
Washtenaw.....	5201	3313	569	41
Wayne.....	21524	15867	986	65
Wexford.....	776	909	241	3
Total.....	183725	172205	28861	13198

Winans' plurality over Turner, 11,520. There were 47 scattering votes; total poll for Governor, 397,856. Mr. Partridge, Prohibition candidate, received also a portion of the vote of the Patrons of Industry. Mr. Belding was the candidate of the Industrial party.

Lieutenant-Governor.—Strong, D., 180,340; Linton, R., 178,498; Allen, P., 25,410; McGregor, I., 14,291. Strong's maj., 1842.

Secretary of State.—Soper, D., 180,855; Gardner, R., 178,149; Palmer, P., 25,179; Adams, I., 14,284. Soper's maj., 2706.

State Treasurer.—Braastad, D., 179,744; Moore, R., 178,857; Coddington, P., 25,218; Blackman, I., 14,264. Braastad's maj., 887.

Auditor-General.—Stone, D., 181,072; Giddings, R., 177,795; Ives, P., 25,427; Graham, I., 14,291. Stone's maj., 3277.

Commissioner of Land Office.—Shaffer, D., 181,061; Berry, R., 177,919; Peck, P., 25,304; Treat, I., 14,128. Shaffer's maj., 3142.

Attorney-General.—Ellis, D., 195,308; Huston, D., 177,822; Adsett, P., 25,310. Ellis' maj., 17,486.

Superintendent Public Instruction.—Fitch,

D., 181,189; Schurtz, R., 177,828; Howell, P., 25,300; Littler, I., 14,319. Fitch's maj., 3361.

Member of the State Board of Education.—Hammond, D., 181,262; Ballou, R., 177,726; Scott, P., 25,341; Powers, I., 14,299. Hammond's maj., 3536.

Justice of the Supreme Court.—McGrath, D., 181,667; Cahill, R., 177,023; Cheever, P., 25,179; Atkinson, I., 14,383. McGrath's maj., 4644.

The proposition for a Constitutional Convention received 16,431 votes in its favor, and 26,261 against it. Majority against, 9830.

CONGRESSMEN.

First District.—J. Logan Chipman, D., 21,791; Hibbard Baker, R., 15,861; Caleb S. Pitkin, P., 857; Wm. E. Thornton, I., 49. Chipman's maj., 5930.

Second.—James S. Gorman, D., 16,471; Edward P. Allen, R., 14,568; Thos. F. Moore, P., 2522. Gorman's maj., 1908.

Third.—James O'Donnell, R., 16,679; John W. Fletcher, D., 14,216; Sam'l Dickie, P., 3187; Rob't Fraser, I., 3423. O'Donnell's maj., 2463.

Fourth.—Julius C. Burrows, R., 16,067; George L. Yapple, D., 15,673; G. F. Cunningham, P., 2843. Burrows's maj., 394.

Fifth.—Melbourne H. Ford, D., 22,451; Charles W. Watkins, R., 20,153; Edw. L. Briggs, P., 2587. Ford's maj., 2298.

Sixth.—Byron G. Stout, D., 17,140; William Ball, R., 16,457; Jay Sessions, P., 3004; Geo. W. Caswell, I., 1940. Stout's maj., 683.

Seventh.—Justin R. Whiting, D., 14,553; James S. Ayres, R., 12,566; John Russell, P., 1280; Alfred Paget, I., 288. Whiting's maj., 1987.

Eighth.—Henry M. Youmans, D., 17,230; Aaron T. Bliss, R., 17,154; Wm. M. Smith, P., 2106. Youmans's maj., 76.

Ninth.—Harrison H. Wheeler, D., 15,854; Byron M. Cutcheon, R., 15,794; O. M. Brownson, P., 2778. Wheeler's maj., 60.

Tenth.—Thos. A. E. Weadock, D., 16,721; Watts S. Humphrey, R., 15,055; Silas A. Lane, P., 943; Chas. S. Kilmer, I., 291. Weadock's maj., 1666.

Eleventh.—Samuel M. Stephenson, R., 16,667; John Semer, D., 14,549; Wm. H. Simmons, P., 1759. Stephenson's maj., 2118.

POPULATION BY COUNTIES.

	1880.	1884.	1890.
Alcona.....	3107	4025	5367
Alger.....	.....	.....	1245
Allegan.....	37,815	38,666	38,913
Alpena.....	8789	12,683	15,525
Antrim.....	5237	8716	10,391
Arenac.....	.....	4027	5563
Baraga.....	1804	3039	3054
Barry.....	25,317	24,102	23,708
Bay.....	38,061	51,221	56,357
Benzie.....	3433	4389	5299
Berrien.....	36,785	37,776	41,237
Branch.....	27,941	27,661	26,754
Calhoun.....	38,452	41,585	43,432
Cass.....	22,009	21,202	20,848
Charlevoix.....	5115	9275	9627
Cheboygan.....	6324	9646	11,986
Chippewa.....	5248	8422	11,916
Clare.....	4187	5549	7550
Clinton.....	23,100	27,135	26,458
Crawford.....	1159	2389	2959
Delta.....	6812	9092	15,110
Eaton.....	31,225	31,802	32,025
Emmet.....	6639	7994	8714
Genesee.....	39,220	38,776	39,351
Gladwin.....	1127	1539	4207
Gogebic.....	.....	.....	13,181
Grand Traverse.....	8422	12,092	13,350
Gratiot.....	21,936	25,049	28,632

Hillsdale.....	32,723	31,688	30,600
Houghton.....	22,473	26,146	34,857
Huron.....	20,089	24,521	28,510
Ingham.....	33,676	34,939	37,134
Ionia.....	33,872	32,559	32,726
Iosco.....	6873	10,602	15,223
Iron.....		4432	
Isabella.....	12,159	16,011	18,777
Isle Royal.....	55		135
Jackson.....	42,031	45,232	44,935
Kalamazoo.....	34,342	35,281	39,174
Kalkaska.....	2237	4423	5159
Kent.....	73,253	84,600	109,935
Keweenaw.....	4270	4667	2829
Lake.....	3233	7539	6500
Lapeer.....	30,138	30,057	29,131
Leelanaw.....	6253	7128	7931
Lenawee.....	48,343	49,584	48,401
Livingston.....	22,251	21,568	20,834
Luce.....			2431
Mackinaw.....	2902	5171	7808
Macomb.....	31,627	31,293	31,772
Manistee.....	12,532	19,875	24,207
Manitou.....	1534	1198	860
Marquette.....	25,394	31,597	39,549
Mason.....	10,065	13,221	16,363
Mecosta.....	13,973	20,597	19,572
Menominee.....	11,987	19,129	33,629
Midland.....	6823	8726	10,657
Missaukee.....	1553	3386	5038
Monroe.....	33,624	35,353	32,247
Montcalm.....	33,148	35,356	32,576
Montmorency.....		845	1487
Muskegon.....	26,586	37,554	39,979
Newaygo.....	14,688	18,996	20,466
Oakland.....	41,587	41,100	41,177
Oceana.....	11,699	14,519	15,584
Ogemaw.....	1914	3637	5593
Ontonagon.....	2565	4886	3750
Osceola.....	10,777	14,001	14,626
Oscoda.....	467	1374	1902
Otsego.....	1974	3906	4306
Ottawa.....	33,126	36,225	35,334
Presque Isle.....	3113	4064	4684
Roscommon.....	1459	2588	2041
Saginaw.....	59,095	74,795	82,250
Sanilac.....	26,341	29,563	32,511
Schoolcraft.....	1575	3846	5798
Shiawassee.....	27,069	28,078	30,890
St. Clair.....	46,197	46,783	52,039
St. Joseph.....	26,626	26,277	25,401
Tuscola.....	25,738	30,226	32,448
Van Buren.....	30,807	30,341	30,492
Washtenaw.....	41,848	41,694	42,255
Wayne.....	166,444	188,956	252,838
Wexford.....	6815	10,518	11,362
	1,636,937	1,853,658	2,089,792

The increase of 1884 over 1880 is 216,721; of 1890 over 1884, 236,134; over 1880, 452,855. All the counties except 17 show gains, some of them, as Wayne, by a large percentage. The following is an exhibit of population by congressional districts: First, 256,838; Second, 153,503; Third, 170,864; Fourth, 157,152; Fifth, 216,908; Sixth, 164,949; Seventh, 173,964; Eighth, 203,782; Ninth, 204,013; Tenth, 180,917; Eleventh, 207,153. This shows the great inequality of our present representation in Congress, the First, or Detroit district, for example, having nearly 100,000 more of population than the Second. This will be remedied by the new apportionment of Congressmen, to be made on the basis of the recent census,—it is understood at 174,500 people for each Representative, which would give Michigan 12 Congressmen, with a surplus amounting to 7077. Detroit will have one Congressman by itself, and some part of it be joined with Wayne and other counties to form another Congressional district.

THIRTY MICHIGAN CITIES.

	1880.	1884.	1890.
Detroit.....	116,340	132,956	205,660
Grand Rapids.....	16,507	41,898	64,147
East Saginaw.....	11,350	29,085	*46,169
Saginaw City.....	10,525	13,760	
Bay City.....	20,693	29,412	27,826
Muskegon.....	11,262	17,825	22,668
Jackson.....	16,105	19,100	20,779
Kalamazoo.....	13,552	13,909	17,857
Lansing.....	8319	9774	12,630
Port Huron.....	8887	10,388	13,519
Battle Creek.....	7063	10,051	13,090
West Bay City.....	6397	9490	12,910
Manistee.....	6930	10,367	12,779
Alpena.....	6153	9196	11,228
Ishpeming.....	6039	6840	11,184
Menominee.....	3947	5577	10,606
Flint.....	8409	9017	9845
Ann Arbor.....	8061	7912	9509
Adrian.....	7849	9319	9239
Marquette.....	4690	5690	9066
Ludington.....	4190	5431	7499
Owosso.....	2501	3668	6544
Cheboygan.....	2269	3716	6244
Pontiac.....	4500	5347	6243
Ypsilanti.....	4984	5301	6128
Negaunee.....	4197	4111	6061
Coldwater.....	4681	5099	5462
Big Rapids.....	3552	5902	5265
Monroe.....	4930	5281	5246
Ionia.....	4190	4641	4999
Grand Haven.....	4862	5903	4988

*The consolidated city of Saginaw. By this union Saginaw passes Bay City, and becomes third of Michigan cities. Muskegon has passed Jackson in ten years, and is fifth; Lansing becomes eighth, in place of Saginaw City; Port Huron goes from eighth to ninth; and Battle Creek takes the place of Manistee as tenth. Other Michigan cities and villages, so far as reported:

	1880.	1884.	1890.
Cadillac.....	2213	3907	4455
Mt. Clemens*.....	3057	3825	4742
Niles*.....	4197	4606	4197
Traverse City.....		3111	4036
Holland*.....	2620	2972	3928
Marshall.....	3795	4079	3967
Hillsdale*.....	3441	3549	3920
Charlotte*.....	2910	3595	3848
Wyandotte*.....	3631	3570	3798
St. Joseph.....	2603	2623	3733
St. Johns.....	2370	2623	3119
Greenville*.....	3144	3063	3048
Three Rivers.....	2525	3362	3122
Red Jacket.....	2140	2100	3070
Hastings*.....	2531	2632	2951
Powagiac*.....	2100	2349	2732
Mt. Pleasant.....	1115	1943	2744
Lapeer*.....	2911	2894	2795
Allegan.....	2305	2638	2663
Howell.....	2071	2176	2385
Midland City*.....	1529	2177	2285
Fentonville.....	2152	2232	2162
Hudson.....	2254	2311	2176
Eaton Rapids*.....	3121	2129	1965
Mason*.....	1809	1884	1877
Lake Linden.....	2610	2747	1851
Alma.....	437	1167	1681
Portland.....	1670	1675	1662
Grand Lodge.....	1387	1388	1607
Charlevoix.....	619	1186	1517
Ovid.....	1479	1465	1477
Corunna*.....	1501	1451	1383
Stanton*.....		1721	1350

*Now cities. All figures above, of population of counties and cities, are based upon previous report of Census Bureau, fixing total population at 2,089,792. A later Bulletin fixes the total at 2,093,889; but corrections in detail

are not received in time for this number of the Year-book. There is no great change, however, in any of the figures given for city, town, or county.

The bonded debt of the State, as returned to the Census Bureau for the fiscal year 1879-80, was \$913,149.97; for 1880-90, \$239,992.83. Floating debt 1879-80, \$3,416,008.93; 1880-90, \$5,253,920.04. The bonded debt of thirty-six of our cities in 1880 was \$5,904,045; 1890, \$6,902,604; increase, \$998,559; percentage of increase, 17. Their floating debt in 1880 was \$3,600; 1890, \$191,113; increase, \$187,513; percentage, 5,309. Total debt 1880, \$5,907,645;

1890, \$7,093,717; increase, \$1,186,072; percentage, 20. The sinking fund was \$542,284 in 1880; in 1890, \$808,114; increase, \$265,830; percentage, 49. Total available resources in 36 cities, 1880, \$1,422,855; 1890, \$2,813,274; increase, \$1,390,419; percentage, 93. Debt in excess of resources in 32 cities, 1880, \$4,583,710; 1890, in 31 cities, \$4,469,562; decrease, \$114,148. Resources in excess of debt in four cities, 1880, \$98,920; 1890, five cities, \$189,119; increase, \$90,199; percentage, 91. Annual interest charge of 36 cities, 1880, \$420,599; 1890, \$394,223; decrease, \$26,376. The figures in detail are as follow:

DETROIT AND WAYNE COUNTY.

City Government, 1891.

Mayor—Hazen S. Pingree. Salary, \$1200.
Mayor's Secretary—Alex. I. McLeod. \$1500.
Controller—Peter Rush. \$2000.
Deputy Controller—Patrick Barry.
Clerk—Augustus G. Kronberg. \$2500.
Deputy Clerk—James H. Kelly. \$2000.
Treasurer—Thomas P. Tuite. \$3000.
Deputy Treasurer—John W. Corcoran. \$2000.
Receiver of Taxes—Charles K. Trombly. \$2500.
Assistant Receiver—Wm. J. Shields. \$2000.
City Counselor—Vacant, by election of John W. McGrath to the Supreme Bench. \$2500.
Assistant Counselor—Edw. Minock. \$1500.
City Attorney—Charles W. Casgrain. \$2500.
Assistant Attorney—Charles S. McDonald. \$2000.
City Engineer—H. D. Ludden. \$2500.
Engineer City Hall—Joseph Kelluer. \$1200.
Chief Accountant—Henry P. Sanger. \$2500.
Market Clerk—Anthony J. Kennary. \$1500.
Historiographer—Silas Farmer. Unpaid.
Boiler Inspector—Gustave Pfeffer. \$1600.
Gas Inspector—Peter Kraus. \$1084.
Meat Inspectors—Eastern district, George Schindler; Western, Louis J. Ouellette. \$1200.
Inspector of Chimneys—Charles Hauser, LeRoy Carway.
Poundmasters and Wood Inspectors—Eastern district, Dominick Latour; Western, Albert Erschig. \$900.
Weighmasters—Eastern district, Anthony Clements; Western, Frank Ashley. \$1100.

COMMON COUNCIL.

The Board of Aldermen is composed of two members from each of the 16 wards, 32 in all, who each receive an annual salary of \$600. Half the board are elected at the November election each year, and the terms are for two years. The following will constitute the Board of Aldermen for 1891, commencing on the second Tuesday of January, 1891. Each of the Aldermen first named in each ward below serves for one year; the others for two years.

1st Ward—Walter H. Coots, R.; Joseph T. Lowry, R.
2d—Julius P. Gilmore, R.; James Vernor, R.
3d—Frank N. Reves, R.; Wm. P. Langley, R.
4th—Stephen A. Griggs, R.; Edwin F. Webster, R.
5th—Charles P. Karrer, D.; John C. Jacob, D.
6th—Cyrus B. Barnes, R.; James Lennane, D.
7th—Albert Roth, D.; Henry Schehr, R.
8th—Murray Watson, D.; Wm. B. Thompson, D.
9th—Ernest L. Reschke, R.; Frank Schmidt, D.

10th—Charles A. Buhner, R.; Anthony H. Reynolds, D.
11th—Wm. Rickert, R.; Michael W. McGuire, D.

12th—James Brennan, Ind.; Adam Hoffman, R.

13th—Wm. O'Regan, D.; Jacob F. Meier, R.

14th—Wm. Uthes, D.; Neil Grant, D.

15th—George Scott, D.; John A. Fisher, D.

16th—Ferdinand Amos, D.; John McIntyre, D.

At the November election, 1890, John C. Coll was elected to fill the unexpired term of Frank Wotzke, deceased. His term expires on the second Tuesday of January, 1891.

Democrats, 16; Republicans, 15; Independent Dem., 1. Until the reorganization of the Council, Alderman Griggs is President of the body, and Alderman Vernor President *pro tempore*.

BOARD OF ESTIMATES.

At large—. C. Bowen, John N. Bagley, Anthony Petz, Louis P. Campau.

1st Ward—John J. Mulheron, Wm. R. Farland.

2d—Charles Wright, James B. McKay.

3d—Jacob E. Pospeshil, Adolphus Merritt.

4th—Walter G. Seelye, Wm. L. Wild.

5th—Theo. Gorenflo, Louis A. Ruch.

6th—Patrick H. Hickey, Richard F. Reaunie.

7th—J. Wm. Koch, Martin Bayer.

8th—James Cornell, Wm. Viehoff.

9th—Anthony Valentine, John B. Peters.

10th—Chas. P. Hickox, vacancy.

11th—Wm. Sauer, John J. Raeske.

12th—Albert Ioeppka, Adam Hoffman.

13th—George Galster, Peter Stenius.

14th—Alex. Nelson, L. Verdon.

15th—Christopher Damitlo, Leo Lenaert.

16th—John Markey, Sam'l Hargreaves.

The Board of Estimates is composed of 32 members, two from each ward, half of whom are elected at the November election of each year. The members of the Board *ex officio* are the President of the Common Council, the Chairman of its Committee of Ways and Means, the City Controller, City Counselor, President of the Board of Education, the Boards of Water, Police, Fire, and Poor Commissioners, and the senior members of the Boards of Public Works and of Inspectors of the House of Correction. They take part in the deliberations of the Board, but do not vote. It is the office of this Board to consider the general city estimates and all measures for raising money by tax-levy or bond-issues, and to decrease or disapprove, but not increase, the same. Only amounts approved by the Board can be raised. Members receive \$3 for each day of actual session. The first-named in each ward will go out of office in one year, the second-named in two years.

BOARD OF PUBLIC WORKS.

Jacob Guthard, Michael J. Griffin, one vacancy by resignation of James Hanley, Sheriff-elect. \$2500.

President—Jacob Guthard.
 Secretary—John McVicar. \$2000.
 Chief Clerk—James C. Oldfield. \$1200.
 Permit Clerk—Frank X. Lingemann.
 Record Clerk—Charles Waite.
 Chief Sewer Inspector—Francis J. Chamberlain. \$3.75 a day.
 Sidewalk Inspectors—Walter V. Kies, John A. Wilkie, Frank Favor, jr., Wm. A. Raynor, M. Brennan, Joseph Przybylowski. \$1034.

BOARD OF BUILDING INSPECTORS.
 E. W. Simpson, Edward R. Harris, Fred Canney. \$1200.

COMMISSIONERS OF SINKING FUND.
 The Mayor, Controller, Treasurer, and Council Committee on Ways and Means.

BOARD OF POLICE COMMISSIONERS.
 Wm. C. Colburn, Horace M. Dean, Sidney D. Miller, Frank J. Hecker.
 President—Wm. C. Colburn.
 Secretary and License Collector—L. R. Meserve. \$2500.
 Superintendent of Police—Gen. James E. Pittman. \$3000.

Deputy Sup't—M. V. Borgman. \$1800.
 Captains of Police—C. C. Starkweather, Joseph Burger, W. H. Myler, Jesse Mack. Each, \$1700.

Sergeants of Police—A. H. Bachman, A. H. Britton, Wm. Thompson, Ben High, Eugene Sullivan, G. H. Thomas, Wm. Nolan, James Purdue, George H. Thompson, Joseph F. Krug, John Martin, E. F. Culver. Each, \$1000.
 Attorney—Charles M. Swift. \$1000.
 Surgeon—Dr. J. B. Book. \$1000.

BOARD OF FIRE COMMISSIONERS.
 Marshall H. Godfrey, Bruce Goodfellow, Oren Scot'en, F. Moran.

President—Bruce Goodfellow.
 Vice-President—M. H. Godfrey.
 Secretary—James E. Tryon. \$2200.
 Chief Engineer—James Battle. \$2500.
 Assistant Chief Engineer and Supply Agent—James R. Elliott. \$1800.
 District Engineers—John Kendall, James C. Broderick. \$1200.
 Sup't of Telegraph—John McDuff. \$1500.
 Fire Marshal—Wm. H. Baxter. \$1800.
 Department Surgeon—B. P. Brodie, M. D. \$1800.

Veterinary Surgeon—R. Jennings, V. S. \$350.

BOARD OF WATER COMMISSIONERS.
 Samuel G. Caskey, John Pridgeon, sr., H. M. Duffield, August Goebel, one vacancy by death of Joseph Nagel.

President—Col. Henry M. Duffield.
 Vice-President—
 Secretary—Maj. L. N. Case. \$2400.
 Sup't of Construction and Extension—Henry Bridge. \$2400.
 Sup't of Meters and Inspection—Thomas R. Putnam. \$1900.

Sup't of Grounds—E. A. Scribner. \$900.
 Chief Engineer—John E. Edwards. \$2200.
 Assistant Engineer—Uriah Gould. \$1200.

BOARD OF EDUCATION.
 President—William Adair.
 President *pro tem*—Thos. F. Comerford.
 Secretary—Jno. R. King. \$2500.
 Treasurer—John S. Schmittiel.
 Sup't of Schools—Wm. E. Robinson. \$4000.
 Supervisor of Property—R. Wallace. \$2000.

Members.

[The terms of the first eight expire June 30, 1891; of the others, June 30, 1893.]
 1st Ward—Henry A. Chaney.

2d—Willard M. Lillibridge.
 3d—Frederick W. F. Brede.
 4th—Mrs. S. C. O. Parsons.
 5th—Wm. G. Springer.
 6th—Thomas F. Halloran.
 7th—John B. Todenbier.
 8th—Thomas F. Comerford.
 9th—William Voigt, jr.
 10th—Johnston Stuart.
 11th—Frank X. Lingemann.
 12th—David Ferguson.
 13th—Thomas Berry.
 14th—Dr. B. R. Hoyt.
 15th—William Adair.
 16th—James F. Ratigan.

PUBLIC LIBRARY COMMISSIONERS.

George S. Hosmer, Magnus Butzel, Henry A. Harmon, R. S. Willis, Edwin F. Conely, Wm. Adair *ex officio*.
 President—George Hosmer.
 Vice-President—Magnus Butzel.
 Secretary—Herbert Bowen.
 Treasurer *ex officio*—John S. Schmittiel.
 Librarian—Wm. Utley.

BOARD OF HEALTH.

Drs. Peter Klein, C. C. Miller, and E. A. Chapoton, the Mayor, Controller, and President of Police Commissioners.

Health Officer—Sam'l P. Duffield, M. D. \$3000.
 City Physicians—Drs. Thos. Kenning, Wm. M. Harvey, W. R. Murdie. \$1500.
 Milk Inspector—Charles B. Andrews. \$900.
 Disinfecter—Waldo R. Clark. \$900.
 Clerks—A. F. Schulte, Dr. Wm. Lockhart. \$1400 and \$1034.

BOARD OF ASSESSORS.

John J. Perren, Wm. T. Dust, one vacancy by death of Joseph Nagel. Auditor-elect. \$2500.
 Assistants—John C. Kinsel, John Haire, Hugh McClellan. \$1500.
 Chief Clerk—Michael Halloran. \$2000.

BOARD OF POOR COMMISSIONERS.

Siegmund Simon, W. K. Muir, Joseph B. Moore, George Lane.
 President—S. Simon.
 Vice-President—W. K. Muir.
 Secretary—P. H. Dwyer. \$1200.
 Superintendent—J. T. Martin. \$1500.
 Investigator—John Kolb.

COMMISSIONERS OF PARKS AND BOULEVARD.

George H. Russel, John Erhardt, Wm. Livingstone, jr., Wm. K. Parcher.
 President—George H. Russel.
 Vice-President—Wm. Livingstone, jr.
 Secretary—John R. Stirling. \$2000.
 Superintendent—Wm. Ferguson. \$2000.

INSPECTORS OF HOUSE OF CORRECTION.

Jeremiah Dwyer, Chairman; Wm. J. Chittenden, Merrill B. Mills, F. W. Lichtenberg.
 Superintendent—Joseph Nicholson. \$3000.
 Physician—Augustus Kaiser, M. D. \$600.

JUDICIAL.

Recorder's Court.

Judge—George S. Swift. \$4000.
 Assistant Judge—Fitzwilliam H. Chambers. \$3000.
 Clerk—George H. Leshner. \$1800.
 Deputy Clerk—Charles R. Bagg. \$1800.
 Stenographer—Wm. W. O'Brien. \$2000.

Police Courts.

Police Justices—Edmund Haug, Patrick J. Sheahan. \$3000.
 Clerk—Sam'l D. Craig. \$1800.

Justices' Court.

Justices—Walter Ross, John Patton, Overton L. Kinney, James Phelan. \$2000.

Clerk—Wm. F. Baker. \$1500.

Thomas W. Fitzsimmons was elected Justice in November, 1890, and will succeed Walter Ross July 4, 1891.

Judges of the Circuit Court—George S. Hosmer, Cornelius J. Reilly, Henry N. Brevoort, George Gartner. Salaries, \$6000.

Judge of Probate—Edgar O. Durfee. \$4000.

Auditors—Geo. C. Lawrence, Jas. Holihan, one vacancy caused by death of Joseph Nagel, Auditor-elect, claimed by Chas. P. Collins, previously Auditor. \$3500.

Sheriff—James Hanley. Fees.

Clerk—William May. \$8500.

Treasurer—George C. Huebner. \$5000.

Register of Deeds—John A. Heames. \$3500.

Prosecuting Attorney—Samuel W. Burroughs. \$3500.

Surveyor—Thomas Campau. Fees.

Circuit Court Commissioners—John C. Considine, Jr., Lewis C. Watson. Fees.

Coroners—James Downs, James R. Keefe. \$1200.

Drain Commissioner—J. A. Stevens. Fees. Superintendents of the Poor—Albert H. Raynor*, Alvin Seaman*, Joseph B. Moore, Sigmund Simon, W. K. Muir, Theo. E. Deming*. \$600; others unsalaried.

BOARD OF SUPERVISORS.

Chairman—John C. Jacobs.

Clerk—Wm. May.

Members—Detroit, the Aldermen and Chairman of the Board of Assessors; Brownstown, J. P. Reed, Brownstown; Canton, Orlando R. Pattengill, Plymouth; Dearborn, Wm. M. Holton, Dearborn; Ecorse, Thos. Sanders, Ecorse; Greenfield, Timothy Kelly, Highland Park; Grosse Pointe, David Trombly, Grosse Pointe; Hamtramck, Roger Echlin, Maybury; Huron, Jesse Butler, Belden; Livonia, Albert T. Radcliffe, Stark; Monguagon, Louis Groh, Neuton; Nankin, Charles H. Cady, Wayne; Plymouth, Lewis C. Hough, Plymouth; Redford, Eli Mettetal, Greenfield; Romulus, Joseph Boltz, Taylor Center; Springwells, Wm. Meyer, Delray; Sumpter, Wm. A. Atyeo, Martinsville; Taylor, Squire B. Lappeus, Dearborn; Van Buren, Jasper Moore, Romulus; Wyandotte, Chas. G. Chittenden, Denis Sullivan, Wm. Bolton. \$3 a day when on duty.

WAYNE COUNTY ELECTION, NOV., 1890.

STATE OFFICERS.

Governor.—Winans, D., 21,524; Turner, R., 15,867; Partridge, P., 966; Belding, I., 65. Winans' maj., 5657.

Lieut.-Gov.—Strong, D., 21,242; Linton, R., 16,345; Allen, P., 908; McGregor, I., 81. Strong's maj., 4997.

Secretary of State.—Soper, D., 21,133; Gardner, R., 16,400; Palmiter, P., 912; Adams, I., 69. Soper's maj., 4733.

State Treasurer.—Braastad, D., 20,432; Moore, R., 17,033; Coddington, P., 903; Blackman, I., 57. Braastad's maj., 3399.

Auditor of State.—Stone, D., 21,176; Giddings, R., 16,400; Ives, P., 921; Graham, I., 63. Stone's maj., 7776.

Commissioner of Land Office.—Shaffer, D., 21,067; Berry, R., 16,546; Peck, P., 921; Treat, I., 65. Shaffer's maj., 4541.

Attorney-General. Ellis, D., 21,178; Huston, R., 16,470; Adsett, P., 916. Ellis's maj., 4708.

Superintendent of Public Instruction.—Fitch, D., 21,160; Schurtz, R., 16,467; Howell, P., 924; Littler, I., 64. Fitch's maj., 4693.

Member State Board of Education.—Hammond, D., 20,177; Ballou, R., 16,456; Scott, P., 921; Powers, I., 68. Hammond's maj., 4721.

Justice of Supreme Court.—McGrath, D.,

21,782; Cahill, R., 15,834; Cheever, P., 929;

Atkinson, I., 61. McGrath's maj., 5953.

Constitutional Convention.—For, 874; against, 1316. Maj. against, 442.

CONGRESSMAN.

Chipman, D., 21,791; Baker, R., 15,861; Pitkin, P., 857; Thornton, I., 49. Chipman's plurality, 5930.

STATE SENATORS.

First District, Smith, D., 6644; Hopper, R., 4659; Grece, P., 90. Smith's plurality, 1966.

Second, Weiss, R., 6804; Wheaton, D., 5932; Briggs, P., 280. Weiss's plurality, 872.

Third, Park, D., 7248; Willard, R., 6144; Felt, P., 310. Park's plurality, 1104.

REPRESENTATIVES.

First District.—Unofficial returns gave the vote as follows: Miner, D., 17,405; Jackson, D., 16,949; Henze, D., 16,468; Fildew, D., 15,951; Herz, D., 15,901; Nolan, D., 16,734; Marion, D., 15,830; Fairbairn, R., 19,850; McKinlay, R., 19,464; Davock, R., 17,162; Ellis, R., 17,158. The Republican candidates were voted for under the law of 1889, which allows cumulative voting; and by these returns only the three Democrats first named, with the four Republicans, were elected. But the County Board of Canvassers, assuming the unconstitutionality of the law, adopted a report of votes as follows: Miner, 17,216; Jackson, 16,217; Henze, 16,452; Nolan, 16,588; Herz, 16,337; Fildew, 16,170; Marion, 16,004; Fairbairn, 12,508; Ellis, 12,238; Davock, 12,165; McKinlay, 11,517,—and declared the seven Democrats elected. The Supreme Court has since held the law to be invalid, and the seven will take their seats.

Second, Wendell, D., 1378; Durfee, R., 1075; Earing, P., 146. Wendell's plurality, 303.

Third, Holton, D., 1077; McDonald, R., 926; Lathers, P., 89. Holton's plurality, 151.

Fourth, McCloy, D., 1738; Vreeland, R., 1608; Melter, P., 117. McCloy's plurality, 45.

The vote for the county officers, was as follows: Sheriff, Hanley, D., 18,980; Collins, R., 18,636. For Clerk, May D., 21,631; Austin, R., 15,342. Treasurer, Huebner, D., 20,821; Bleser, R., 16,621.

Register of Deeds—Heames, D., 19,650; Bolger, R., 17,936. Heames's majority, 1714.

Auditor—Nagel, D., 19,612; Stoll, R., 17,529; Nagel's maj., 2083.

Prosecuting Attorney—Burroughs, D., 20,237; Wilcox, R., 17,362; Burroughs's maj., 2875.

Circuit Court Commissioners—Watson, D., 21,250; Considine, D., 21,015; Greenstine, R., 16,542; Bacon, R., 16,157. Watson's maj., 4706; Considine's maj., 4858.

Surveyor—Campau, D., 21,060; Goodell, R., 16,129; Campau's maj., 4931.

Coroners—Keefe, D., 21,233; Downs, D., 19,635; Brown, R., 17,756; Gutekunst, R., 16,543. Keefe's maj., 3477; Downs's maj., 3083.

CITY ELECTION.

ALDERMEN.

First Ward, Jos. T. Lowry, R., 1356; Ed J. Williams, D., 820; E. C. D. Clark, I., 184. Lowry's maj., 352.

Second, Jas. Verner, R., 1233; Jos. A. Marsh, D., 832. Verner's maj., 401.

Third, Wm. P. Langley, R., 1099; Frank Katus, D., 959. Langley's maj., 140.

Fourth, Edwin F. Webster, R., 1200; A. Y. Ladue, D., 972. Webster's maj., 228.

Fifth, John C. Jacob, D., 1360; John C. Roemer, R., 840; P. Kramer, Jr., 40. Jacob's maj., 516.

Sixth, Jas. Lennane, D., 1332; A. H. Raynor, R., 1081. Lennane's maj., 251.

Seventh, Henry Schehr, R., 950; Henry Goodenau, D., 905. Schehr's maj., 45.

Elighth, Wm. B. Thompson, D., 1165; F. Cronenwett, R., 910. Thompson's maj., 25.
Ninth, Frank Schmidt, D., 1284; Anthony M. Conus, R., 1126. Schmidt's maj., 158.
Tenth, A. H. Reynolds, D., 1276; Chas. Appelt, R., 1014; Wm. H. Venn, Ind., 50. Reynolds' maj., 262.
Eleventh, Michael H. McGuire, 1050; Henry Boetteher, 865. McGuire's maj., 195.
Twelfth, Adam Hoffman, 965; Bernard O'Reilley, 532. Hoffman's maj., 453.
Thirteenth, Jacob F. Meier, R., 657; John Kessler, D., 618. Meier's maj., 39.
Fourteenth, Neil Grant, D., 606; Frank Goodman, R., 525. Grant's maj., 83.
Fifteenth, John A. Fisher, D., 575; Thos. P. Corcoran, R., 374; Walter Preston, Ind., 18. Fisher's maj., 183.
Sixteenth, John McIntyre, D., 618; Chas. Goldner, sr., R., 461; David Wyle, Ind., 38. McIntyre's maj., 119. To fill vacancy, John Coll, R., 546; Peter Rath, D., 527. Coll's maj., 19.

JUSTICE OF THE PEACE.

Thomas W. Fitzsimmons, D., 16,137; Frank Tyler, R., 14,325. Fitzsimmons' maj., 1812.

CONSTABLES.

First Ward, Hiram H. Hunter; 2d, Jas. B. Willcoxson; 3d, Wm. T. Weitz; 4th, Benj. Sparling; 5th, John Grum; 6th, Dennis Donovan; 7th, Wm. H. Guyott; 8th, John D. Robertson; 9th, Jos. F. Bowen; 10th, Dennis Donney; 11th, Chas. Heimiller; 12th, Albert Schneider; 13th, Jos. Genick; 14th, Gustav A. Kurth; 15th, Thos. Corby; 16th, Otto Kleinow.

ESTIMATORS.

At large, to fill vacancy, Chas. C. Bowen. First Ward, John S. Mulheron; 2d, Jas. B. McKay; 3d, Adolphus Merritt; 4th, Wm. L. Wild; 5th, Louis A. Ruch; 6th, Richard F. Reaume; 7th, Wm. Kooch; 8th, Wm. Viehoff; 9th, John B. Peters; 10th, Chas. P. Hickox; 11th, John J. Raeske; 12th, Jos. Tuchocke; 13th, Geo. Galster; 14th, Lawrence Verdan; 15th, Leo Lenaert; 16th, John Markey.

THE SPORTING WORLD.

Athletic Events.

In view of the local and general interest in the Amateur Athletic Union, and for the benefit of the four local Athletic clubs, the records of the more important events are here given.

EVENT.	BEST RECORD.	MADE BY.	DATE.	PLACE.
100 yard dash...	American, 9 4-5 sec...	John Owen, Jr....	Oct. 11, 1890...	Washington.
"	English, 10 sec.....	A. Wharton.....	July 3, 1886....	London, Eng.
125 yards.....	American, 12 2-5 sec...	C. H. Sherrill....	May 4, 1889....	New York.
220 yard dash...	American, 22 sec.....	Wendell Baker....	June 14, 1888....	Boston.
"	English, 21 4-5 sec.....	C. G. Wood.....	June 25, 1887....	London.
440 yard r. n.....	American, 47¾ sec.....	Wendell Baker....	July 1, 1886....	Boston.
"	English, 84¼ sec.....	H. C. L. Tindall....	June 30, 1889....	London.
Half mile run.....	Americ'n, 1 m. 55¼ sec	W. C. Dohm.....	June 22, 1889....	Travers Island.
"	English, 1 m. 54 sec.....	F. J. H. Cross.....	March 9, 1888....	Oxford.
One mile run.....	Amer., 4 min 21 2-5 sec	W. G. George.....	Nov. 11, 1882....	New York.
"	English, 4 m 18 2-5 sec	W. G. George.....	July 29, 1882....	London.
Two mile run.....	Amer., 9 m 38 3-5 sec...	E. C. Carter.....	July 10, 1886....	Brooklyn.
"	English, 9 m. 17 2-5 sec	W. G. George.....	April 26, 1884....	London.
120 yd. hurdle race over 10 hurdles 3 ft. 6 in. high.....	American, 16 sec.....	F. T. Ducharme... A. F. Copland..... H. L. Williams....	Oct. 11, 1890... Sept. 27, 1890... Sept. 27, 1890...	Washington. Montreal. "
"	English, 16 sec.....	U. N. Jackson.....	Nov. 14, 1865....	Oxford.
"	"	S. Palmer.....	April 15, 1878....	London.
"	"	C. T. Daft.....	July 3, 1886....	"
"	"	S. Joyce.....	June 3, 1888....	Crew.
220 yd. hurdle race.	American, 25¼ sec.....	T. Lee.....	May 31, 1890....	New York.
Mile walk.....	American, 6 29 3-5 sec...	F. P. Murray.....	Oct. 27, 1883....	"
"	English, 6 32¼ sec.....	H. Whyatt.....	May 3, 1884....	Birmingham.
Three mile walk...	Amer., 21 m. 9 1-5 sec...	F. P. Murray.....	Nov. 6, 1883....	New York.
"	Eng., 21 m. 25 1-5 sec...	C. W. V. Clark....	June 29, 1887....	London.
Run'g high jump...	American, 6 ft. 4 in....	W. Byrd Page.....	Oct. 7, 1887....	Philadelphia.
"	English, 6 ft. 3¼ in....	W. Byrd Page.....	Aug. 15, 1887....	Stourbridge.
Run'g broad jump.	American, 23 ft 3¼ in...	A. F. Copland.....	Oct. 11, 1890....	Washington.
"	Irish, 24 ft 2 in.....	P. Davin.....	Sept. 13, 1883....	Port Arlington.
Pole Vault.....	American, 11 ft. 5 in...	H. H. Baxter.....	Oct. 15, 1887....	New York.
"	English, 11 ft. 7 in....	E. L. Stones.....	June 2, 1888....	Southport.
Throwing 56-pound weight—7 ft. circle.	American, 32 ft. 10 in...	C. A. J. Trunkberner	Oct. 11, 1890....	Washington.
"	English, no record....			
Putting 16-lb. shot.	American, 46 ft. 2 in...	George R. Gray....	Sept. 20, 1890....	New York.
"	English, 44 ft. 10 in...	J. O'Brien.....	July 11, 1885....	Dublin.
Throwing 16-pound hammer from 7 ft. circle.....	American, 133 ft. 8 in...	J. S. Mitchell.....	Oct. 10, 1889....	Elkton, Md.
"	English, 126 ft. 4 in....	P. Lawless.....	Sept. 4, 1889....	Cork.

*L. H. Carey claimed to have run 100 yards in 9¼ seconds. Claim disallowed by A. A. U.

Base Ball.—Series between Louisville and Brooklyn abandoned on a tie. Bad weather.

Bicycling.—American (ordinary)—1 mile 2:25 3/5; Windle; 3/4 mile, 1:49 2-5; Windle; 5 1-5 miles, 13:51 3-5; Rich; 1/4, 35 1-5; Rowe; 3 miles, 8:07 2-5; Rowe. English—1/4, 33:15; Archer; 2 miles, 5:12 1-5; Illston; 4 miles, 11:05 2-5; Osmond. Safety—1 mile, Jones, English, 2:20 4-5; Berlo, American, 2:30; 5 miles, 13:19; Lourie, English; 2 miles, 5:22 3-5; Lourie, English; 3 miles, 8:12 4-5; Lourie, English; 4 miles, 10:57 3-5; Lourie.

Tricycling.—One mile, Berlo, American, 2:36; 5 miles, Lourie, English, 13:19; 1/4 mile, Samson, English, 34 2-5.

The Turf.—1-mile trot, Maud S., 2:59 1/4; 1-mile pace, Johnston, 2:54 1/4; 1-mile pace with running mate, Westmont, 2:13 1/4; 1-mile running, Salvator, 1:39 5/16.

Pedestrianism.—100 yards, 9 4-5 seconds, H. M. Johnson, Cleveland, July 31, 1886; 220 yards, C. G. Wood, 21 3-5 seconds; 440 yards, W. Baker, 47 3/4 seconds; 880 yards, F. Hewitt, 1:53 1/4; 1 mile, W. G. George, 4:13 3/4; 5 miles, J. White, 24:40; 50 miles, George Cartwright, 5:55:04 1/2; 100 miles, C. Rowell, 13:26:30; 6 days, G. Littlewood, 623 miles; 1 hour, L. Bennett, 11 miles, 970 yards.

Walking.—1 mile, W. Perkins, 6:23; 5 miles, J. W. Raby, 35:10; 100 miles, A. W. Sinclair, 19:41:50; greatest distance walked without rest, 12 miles, 385 yards, C. A. Harriman; 1 hour, 8 miles 302 yards, John Meagher.

William Spencer, England, walked 5306 miles in 100 days in 1884. He was 64 years old, and walked both out of doors and in halls.

Swimming.—1 mile, Chas. F. Senk (straight-away), 12:42 1/2; 5 miles, C. White, 1:04:23. Capt. Webb kept afloat 60 hours without assistance of any kind.

Skating.—1 mile, Timothy Donoghue 2:12 3-5; 2 miles, Joseph F. Dougherty, 6:24; 5 miles, J. F. Dougherty, 16:45; 10 miles, F. Dowd, 35:55; 50 miles, S. J. Montgomery, 4:14:36; 100 miles, John Ennis, 11:37:45; 1 hour, Alex. Paulsen, 16 miles 590 yards. Anna Clark Jagerisky skated 90 hours consecutively with but 30 minutes' rest at Detroit in 1868. Paulsen is champion.

Rowing.—1 1/2 miles, Watkins, N. Y., crew (at Detroit), 7:43 1/2; 2 miles, (with turn), C. Courtney and F. E. Yates, 12:16; 3 miles, four oars (straightaway), Argonauta crew, 15:37 1/4; eight oars, Cornell U. B. C., 17:34 1/4; single scull, Jake Gaudaur, 19:54; 5 miles, Harlem River crew, 30:44 1/4; single scull, Edward Hanlan, 33:56 1/4; 10 miles, Joshua Ward, 1:23; 50 miles, C. A. Bernard, 8:55:20. W. O'Connor, champion of America; John McLean, champion of the world.

The famous America's cup was won in 1851 by the yacht America over the Aurora, off Cowes. It has since been won by English yachts 13 times, Scotch boats have won it 7 times, and United States yachts have been victors 32 times in races for this trophy.

Yale College has won the inter-collegiate races 11 times and Harvard 10, Yale winning the races of the last six years.

Jumping.—Running long jump (with weights), John Howard, 29 ft. 7 in.; standing long jump (with weights), G. W. Hamilton, 14 ft. 5 1/2 in.; (without weights), H. M. Johnson, 10 ft. 10 1/2 in.; running high jump, W. B. Page, 6 ft. 4 in.; standing high jump, T. F. Kearney, 5 ft. 5 1/2 in.; pole vault, T. Ray, height, 11 ft. 6 1/2 in.; horse, Chandler, 37 feet in lon; jump; horse, high jump, 6 ft. 11 1/4 inches.

Glass-ball Shooting.—Capt. A. H. Bogardus, 5500 glass balls broken, out of 5854 thrown from trap. W. F. Carter hit 60,016 objects, out of a possible 64,881.

Fast Time.—Locomotive on Pennsylvania

railroad, 1 mile in 50 1/2 seconds; steamer City of New York, from Roche's Point, England, to Sandy Hook Bar, 6 days and a trifle over 3 hours; sailing vessel, Liverpool to N. Y., Dreadnaught, 12 days 5 hours 25 minutes; 28 miles in 1 hour by the steamer South America on the Hudson river; Yacht Volunteer champion, and holds the America cup; yacht Puritan sailed 38 miles in 3:32:37.

Pugilism.—Heavy-weight, John L. Sullivan; middle-weight, Jack Dempsey; light-weight, Jack McAuliffe; feather-weight, Ike Weir.

Boxing weights: Feather weight, 116 to 126 pounds; light weight, under 140 pounds; middle-weight, 140 to 158 pounds; heavy-weight, over 158 pounds.

Sullivan and Kilrain fought in Richburg, Miss., July 8, 1889, for \$20,000. The largest prize in any previous battle was the \$10,000 prize fought for by Yankee Sullivan and Tom Hyer in 1859. The longest battle fought was between John Smith and James Kelly, in Australia in 1865. Time, 6 hours 15 minutes.

Billiards.—Jacob Schaefer holds the record for the biggest run, the record for the best run in the 15-inch balk-line game.

Tennis Player.—Thos. Pettit.

Miscellaneous.—Yale College holds the football collegiate championship for 1890, and Princeton for 1889. In aerial jumping Sam Patch was the first champion, and Steve Brodie is the present holder of the championship. Dr. Tanner's fasting rec rd of 42 days has not been broken, is disputed by Succi with his 45 days.

Wrestling Champions.—Catch-as-catch-can and Lancashire, Tom Connors; Græco-Roman, Wm. Muldoon; square-hold (collar-and-elbow), John McMahon.

Following is a list of the fastest trotters and pacers:

TROTTERS.—Maud S., 2:59 1/4; Jay-Eye-See, 2:10; Sunol, 2:10 1/2; Gdy, 2:10 1/2; St. Julien, 2:11 1/4; Axtell, 2: 2; Belle Hamil, 2:12 1/4; Maxey Cobb, 2:13 1/4; Harry Wilkes, 2:13 1/2; Bonny McGregor, 2:13 1/2; Phallas, 2:13 3/4; Palo Alto, 1:12 1/4; Sunol, 2:10 1/2; Clingstone, 2:14; Goldsmith Maid, 2:14; Nelson, 2:10 1/2; Stambone, 2:11; Margaret S., 2:12; Jack, 2:12; Hameslake, 2:14; Nancy Hanks, 2:14 1/2.

PACERS.—Johnston, 2:06 1/2; Gold Leaf, 2:11 1/4; Little Brown Jug, 2:11 1/2; Sleepy Tom, 2:12 1/4; Buffalo Girl, 2:13 1/4; Richball, 2:12 1/2; Brown Hall, 2:12 1/2; Roy Wilkes, 2:12 3/4; Mattie Hunter, 2:12 3/4; Hal Pointer, 2:09 1/2; Arrow, 2:13 1/4; Bessemer, 2:13 1/4; Gossip, jr., 2:13 1/4; Budd Doble, 2:13 1/4; Cricket, 2:10; Roy Wilkes, 2:07 3/4; Adonis, 2:11 1/2; Dallas, 2:11 1/2; B. B., 2:13 1/4.

Dist.	HORSE.	Time.
1/4 m.	Jim Miller.....	2:16
3/8 m.	Cyclone.....	0:34 1/2
1/2 m.	Geraldine.....	0:46
5/8 m.	Britannic.....	
	Fordham.....	0:59
3/4 m.	Sallie McClelland.....	
	Fides.....	1:10 1/4
7/8 m.	Britannic.....	1:26 2-5
	Bella B. (straight course).....	1:23 1/2
1 m.	Salvator (straight course).....	1:35 1/2
	Rosine (straight course).....	1:39 1/2
1 1/8 m.	Teuton.....	1:52 3/4
1 1/4 m.	Salvator.....	2:05
	Bouquet (straight).....	2:03 3/4
1 1/2 m.	Firenzi.....	2:33
1 3/4 m.	Hindocraft.....	2:48
1 7/8 m.	Glidelia.....	3:01
1 7/8 m.	Emgra.....	3:20
2 m.	Ten Broeck (against time).....	3:27 1/2
	Wildmoor.....	3:28
3 m.	Drake Carter.....	5:24
4 m.	Ten Broeck (against time).....	7:15 3/4
	Fellowcraft.....	7:19 1/2

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A PREPARED HUMAN MILK.

Made wholly from cow's milk with the constituents arranged so as to closely correspond with human milk.

LACTO-PREPARATA we believe is the nearest approach to human milk that can be prepared and remain permanent; and we are confident that it meets every objection to the artificial feeding of infants deprived of breast milk. It is designed more especially for infants from birth to six or eight months of age.

PUT UP IN HALF AND ONE POUND PACKAGES.



THIS BABY USED LACTO-PREPARATA.

CARNRICK'S SOLUBLE FOOD.

The analysis of this preparation will show that its chemical constituents are almost *identical* with an average sample of *human milk*.

Formula for Carnrick's Food.—SOLUBLE FOOD, as now prepared, is composed of $37\frac{1}{2}$ per cent. of solid constituents of cow's milk (the casein of the milk being partially digested), $37\frac{1}{2}$ per cent. of wheat (the starch being converted into soluble starch and dextrine) and 25 per cent. additional milk sugar.

There is no other food for infants or children in the market that so closely resembles human milk in the proportion of its constituents excepting Lacto-Preparata.

It is put up in hermetically sealed cans, and being sterilized will keep indefinitely, and reach the hands of the nurse or mother free from every contamination.

"In my opinion 'CARNRICK'S SOLUBLE FOOD' is much better for nourishing children than any other Infant's Food which I have analyzed."

DR. A. STUTZER,
Director of the Chemical Test Laboratory and
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C. C. HOPKINS, Lansing,
THOMPSON SMITH, Cheboygan,
SELWYN EDDY, Bay City,
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SENIOR MEMBER

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ESTABLISHED 1866.

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Discussing Natural Gas.

Mrs. Astorbi't (admiring the dazzling whiteness of the draperies and furnishings all around her,) "My dear Mrs. Van Rocker how **do** you manage to maintain such immaculate cleanliness in your house. It is positively frightful how soon one's hands and clothes become soiled by that horrid coal. I am dying to know the secret."

Mrs. Van Rocker (in surprise) "Is it possible that you do not use **Natural Gas?** By all means have it put in at once. It's just too lovely for anything. Not a particle of dirt of any kind, and so easily controlled, you know." And Mrs. V. simply voices the sentiments of hundreds of happy housewives who are burning the gas.

It is **positively perfection** as a fuel. It is **Cheap, Clean, Safe and Reliable.** **2500 Consumers in Detroit,** unite in certifying as to its desirability. It replaces coal in every department of domestic use, without any of its attendant annoyances.

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ONLY FIRST QUALITY GOODS.

Buy, Sell or Wear no Others !

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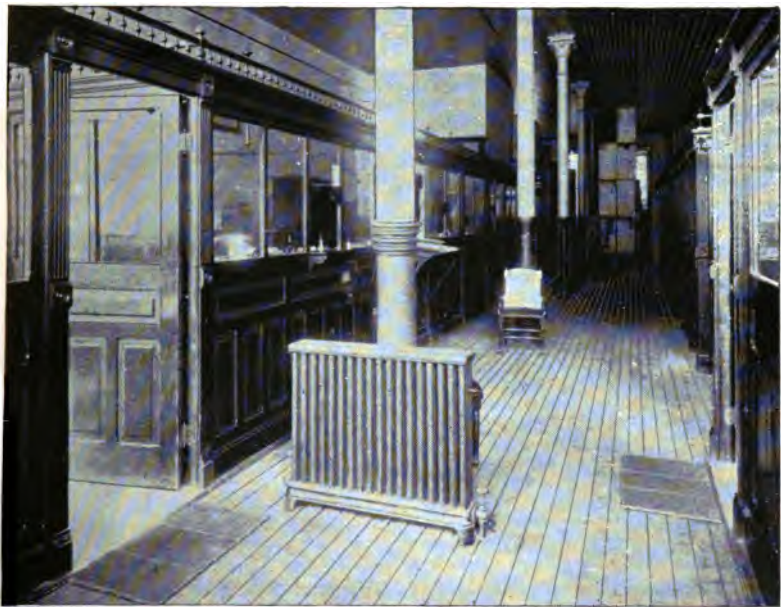
DEMONSTRATE BY THEIR FIT AND DURABILITY
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INTERIOR, SHOWING OFFICES.

Detroit has a national reputation for the manufacture of shoes, and to no firm more than to H. S. Robinson and Company is that reputation due.

This firm, formerly well known as H. S. Robinson and Burtenshaw, built up an immense business at their old place, 65-69 Jefferson Avenue, and since moving into their new handsome quarters, 99-105 Jefferson, have seen it so largely increased that last summer they added a large factory (cor. 5th and Congress) to their facilities.

The Jefferson Avenue stores are occupied for ware-rooms, offices and sales-rooms as follows:

Basement—Storage of Rubbers.

First Floor—Salesrooms and General Offices.

Second Floor—Salesrooms.

Third Floor—General Storage of Boots and Shoes, and Sample rooms for Salesmen.

Fourth Floor—Storage of Rubbers.

Fifth Floor—General Storage of Boots and Shoes.

This building is roomy and finely lighted and its floors average about 15 feet in height, but in spite of this it is at some times of the year fairly overflowing with the stock, and the company feel the necessity for still larger quarters.

In their factory, H. S. Robinson and Company are making a specialty of hand-sewed, hand-turned and Goodyear welt shoes, and their work finds a ready sale throughout Michigan, Ohio, Indiana, Illinois, Wisconsin and Minnesota where the bulk of their trade is.

They have also an immense trade in Rubbers, of which they handle all grades.

The accompanying cuts will give a good idea of the Jefferson Avenue building and of its handsome office interior.

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THE FIRST NATIONAL BANK OF DETROIT.



AT THE HEAD OF THE PROCESSION.

The Old First National and Its New Offices.

"This building was built for a bank in 1836, and has been occupied by this bank since March 1, 1869," said Mr. Emory Wendell, president of the First National bank, "and the recent change in the internal arrangement of the building was absolutely necessary." The accompanying picture will give an idea of the arrangement of the offices, but to appreciate the beauty and costliness of the remodeled bank something more than a picture or even a description is necessary—nothing short of a visit will answer.

Those familiar with the old First National—and what Detroiters is not?—will remember that the offices were at the side away from Griswold st., and did not have the benefit of the light of the windows opposite, for their work. This was inconvenient, as may be supposed, and with various other reasons, decided the directors to make the alterations just completed. The work was done by Wm. Wright & Co., upon plans drawn up by Mr. Wendell, who acted as his own architect, and results would seem to indicate that the intention not to be outdone had been fully carried out.

The beautiful marble work, which forms an important feature of the decorations, was done by John Christie & Son, of this city, and furnishes evidence that for first-class work in this line one need not go outside of Detroit.

As now arranged the counter cuts off the Griswold st. side of the bank office, giving the tellers and clerks the light of the windows upon their desks. The counter itself, which is surmounted by a super-structure of plate glass and orna-

mented ironwork, is of antique oak finish in small panels, and is topped with mottled red marble. The doors, desks and trimmings of the office are also of oak.

On the opposite side of the room are the book-vaults and the offices of the cashier and collection clerk, while in the corner, at the left hand on entering, is the president's room. These book-vaults, by the way, were the occasion of a good deal of perplexity, since to uncover them by removing the offices across the way was to mar the handsome effect of the whole room, but Mr. Wendell hit upon an ingenious solution of the problem by concealing them behind a paneled oak wainscoting wherein the doors fit so tightly that their presence would be unsuspected by the ordinary observer.

They open, however, readily enough to the initiated and disclose iron-bound rooms, where books, papers and other valuables are securely deposited.

Crossing the white marble floor to the back of the office, and through a door into a back hall, one comes to the directors' rooms on the Griswold st. side and on the other rooms for the employees, viz: A toilet room, one in which each has a private locker, and one which will be finished off into a lunch room for them. This in brief for a mere general survey of the offices; space forbids a more detailed description, nor would it be even desirable when a personal visit is so easily made, and will so amply repay the visitor. Suffice it to say that from the frescoed ceiling to the polished marble floor, from the familiar Doric columns guarding the entrance to the directors' room at the rear, one can find nothing which is not characterized by elegance, convenience and the perfect harmony of good taste so essential to a symmetrical whole.—*Detroit Journal*, July 12, 1890.

THE
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146 WOODWARD AVE., DETROIT.

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We name as well known manufacturing houses, whose goods can be purchased in Detroit, only at our store, the following:—

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James Boyd & Son,	A. E. Nettleton & Co.,
L. Boyden & Co.,	The Wisner Shoe Co.,
H. H. Gray's Son,	Geo. W. Herrick & Co.,
D. Armstrong & Co.,	F. A. Barber & Co.,
Laird, Schober & Mitchell.	

We buy from other first class houses who excel in special lines of manufacture, and place on our shelves shoes which as to quality, workmanship, style, and general finish cannot be excelled in the world, will give satisfaction to the purchaser and the maximum value for the price paid.